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EDITORIAL

★

ORGANISATION

A RECENT thought-provoking editorial by Austin Forsyth, G6FO, is outstanding for its clear headed approach to a problem which is giving much concern to those concerned with the future of Amateur Radio activity.

Trends at the I.T.U. Conference at Geneva and ideological clashes at U.N.O. emphasise the realistic nature of G6FO's proposal.

We therefore feel that the relevant parts of his editorial merit reproduction hereunder.

"Amateur Radio activity is on a world-wide scale and at the present time there can hardly be less than 200,000 A.T. stations on the air—with perhaps another 100,000 or so in various stages of suspended animation, retaining their interest and keeping in touch through the literature, itself an important sector of the field of radio publishing.

"In spite of the pressure of this activity and the global nature of our branch of the art of radio communication, the organisation of Amateur Radio, looked at internationally, is loose and indecisive, and therefore weak and ineffective..." (A situation which will remain as long as Russia and the Iron curtain countries generally stand aloof.)

"The need is, therefore, for a truly representative international body, with new aims and objectives, which will include as many as possible of the nations of the world irrespective of their political (or ideological) affiliations."

The W.I.A., realising that the time had come for a more virile organisation to represent and lead the Radio Amateurs of the world, also appreciated the fact that heavy demands would be made on the financial resources of such an organisation, if it was to be really effective.

Our representative to I.T.U., the late John Moyle, was therefore instructed to take the opportunity afforded by informal meeting of representatives of member societies of the I.A.R.U. present in Geneva, to propound the idea of an expanded I.A.R.U. organisation financed by all member societies.

We are therefore well able to appreciate the advantages of the solution proposed by G6FO—

"A solution might be found to lie in making Amateur Radio, in the international context, one of the branch activities of U.N.E.S.C.O.—the United Nations Educational, Scientific and Cultural Organisation. The advantages are manifold, and obvious. Operating under the charter of the United Nations, with its headquarters in Paris, U.N.E.S.C.O. is represented directly or indirectly in all the world's capitals, and is an international body of considerable authority. It disposes of funds totalling nearly £10m. annually, and one of its objects under its own charter is to promote collaboration among the nations by education, science and culture—and who could say that Amateur Radio is not at once educational, scientific and cultural, as well as being, by its very nature, almost forced to the ideal of international collaboration.

"To be clearly identified with U.N.E.S.C.O., would strengthen immeasurably the whole fabric of Amateur Radio, without in any way affecting the rights of individuals or the freedom of action of national groups within their own parishes.

"The only question is—Would U.N.E.S.C.O. be prepared to accept the commitment?"

—FEDERAL EXECUTIVE.

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Audio Limiters, Clippers, and the use of Silicon Diodes as Compressors

L. H. VALE,* VK5NO

IN order to fully modulate transmitters with speech it has been found advisable to use limiters. Because of the nature of speech it is possible to clip off the highest peaks without affecting intelligibility and this allows the average speech power to be increased rather considerably. If the limiting circuit is set so that it is not possible to overmodulate the carrier, i.e. the limiter functions at, say, 90% modulation, we can also be sure that no overmodulation exists, and it will not be necessary to continually monitor the modulation percentage.

The disadvantages of using a limiter are as follows:—

- Speech quality suffers—it becomes "unnatural" but not unintelligible, due to the restriction on dynamic range.
- Because of the increased gain being used at low levels any audible background noise is much more apparent during speech pauses. This background noise drops down to its normal relation to the voice signals when limiting, but this constant fluctuation of the background also adds to the unnaturalness of the transmission.
- Rather severe limitations are placed on the frequency response of the modulation system; this will be discussed further below.

Limiting can be done anywhere in the system between microphone and modulated stage—in fact the modulated stage itself automatically clips the negative peaks at full modulation but so sharply and drastically that the harmonics generated produce sidebands that spread over a wide frequency range. This, of course, is the "splatter" that we must avoid at all costs.

It is not possible to limit, or in any other way amplitude-wise distort, an audio signal without affecting its harmonic content, and if we are to achieve a worthwhile increase in overall audio level, the harmonics added to the speech will be powerful and will occupy a very wide frequency range; if we modulate the transmitter with this limited (or distorted) signal directly then we should produce rather more splatter than if we merely overmodulated the Class C stage; it, at least, only limits the negative peaks.

It is necessary then, to filter out the harmonics generated by the limiter before the audio signal is used to modulate the carrier. This is normally done by using a filter that attenuates all frequencies above three thousand cycles, and if this filter is placed between the

modulator and Class C stage it will also attenuate the harmonics produced in the modulator itself. Clipping or compressing always wastes some of the audio power so this is a major argument in favour of limiting early in the audio system where the powers are so much less. This is known as low level limiting.

However, there are another two factors which tend to make it desirable to limit the peaks as late as possible in the audio system.

Firstly, of course, if we limit the audio early in the modulation system, any change of audio gain after the limiter will correspondingly change the modulation percentage. As the gain of an audio system changes with variations in supply voltages, then some method of stabilising the gain after the limiter is desirable. The easiest method is to employ negative feedback around as much of the amplifier as possible; this need only include the stages prior to the modulator itself, because voltage supplies to the modulator and Class C stage will vary together anyway. If the modulator is Class B or AB2, then heavy negative feedback on the sub-modulator is desirable in any case, to reduce the source impedance looking into the modulator grids.

Secondly, Fig. 1(a) shows a sine wave and Fig. 1(b) shows the same signal clipped to allow a 6 db. increase in average level. If the clipping were

extreme cases as shown in Fig. 1(d). Lines have been drawn to show the comparison between amplitudes of the unlimited and limited signal and it will be seen that if the effect shown in this diagram takes place (as it must do to some extent, unless we use clipping after the modulation transformer and/or choke, or unless we are using an audio system direct coupled throughout), then limiting will not necessarily keep the modulation percentage constant at all frequencies.

The slope at the top of the cycle in Fig. 1(c) is inversely proportional to the ratio of the low frequency cut-off frequency after the limiter to the frequency of the signal being limited. It is a function also of the amount of limiting—the less drastic the limiting, the smaller the width of the flat top, and therefore the smaller the amount of slope. It will also be seen that if

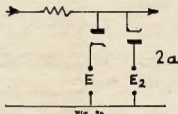


Fig. 2a.

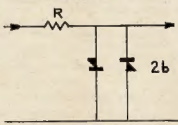
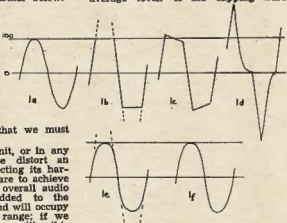


Fig. 2b.



Figs. 1a-1f.

done between the modulation transformer and the Class C stage and there were no other components between the limiter and Class C stage, then Fig. 1(b) would represent the wave form of the modulation. However, if there are any circuits between the clipper and the audio output which tend to reduce the low frequency response—such as coupling condensers, transformers, etc.—then the wave form of the amplifier output tends to become as in Fig. 1(c) and in

the limiting is less sudden than in Fig. 1(b), making a corresponding waveform for 6 db. clipping something like Fig. 1(e), the modulator that produced the output 1(c) will now give an output more like 1(f). The harmonic reducing filter will also tend to round off the corners of the waveform a little, and further reduce the peaks, but as this effect is more troublesome at lower audio frequencies and the filter is effective only at higher frequencies, its effect will not be very great.

If we clip so as to allow 95% modulation rather than 100% on higher audio frequencies, then the cut-off frequency of the modulator system after the limiter must not be greater than three-tenths of the signal frequency for 6 db. clipping, or one-quarter of the signal frequency for clipping approaching 100%. These figures apply only in the impractical case of perfect flat top clipping and no subsequent low pass

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filter; but they do show that the low frequency cut-off after the limiter determines the allowable low frequency response previous to it.

Unfortunately most transmitters use high level modulation with modulation transformers, and as the size and cost of these transformers is proportional to their low frequency response, this tends to limit the cut-off frequency after the limiter to around about 200 to 300 cycles in normal cases. Using our previous figures, this indicates that our input audio must cut at, say, 1,000 cycles, which would result in very thin modulation, therefore it becomes apparent that compression resulting in the waveform shown in Fig. 1(e) is more useful than clipping, because it tends to remove this severe limitation on input amplifier low frequency response.

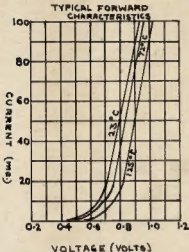


Fig. 2.

In any case, however, it should be taken as a first principal of design that low frequency reduction should be done prior to the limiter and high frequency reduction afterwards.

A compressor generates fewer harmonics than a flat top limiter and thus needs only a simple high-cut filter to avoid splatter.

The foregoing can be summarised as follows—

1. High level limiting versus low level limiting:

- High level limiting avoids the problem of "droop" due to subsequent inadequate low frequency response.
- Because of the size of components in both limiter and harmonic filter, it is more expensive and less flexible than low level clipping.
- Means must be used to stabilise the audio gain between limiter and modulator if low level limiting is used.

2. Clipping (flat top) versus compression:

- Clipping is, in itself, more efficient in that more audio output power for a given input is generated; but this is of doubtful practical value.

(b) Compression reduces the effect of "droop" and therefore allows a greater low frequency response before the compressor.

(c) Compression generates less higher frequency harmonics than limiting, allowing simpler harmonic filters.

(d) It will be shown that compression is simpler to achieve.

From the above, it will be seen that, in the writer's opinion, the best approach to limiting, for Amateur use, is low level compression, because it offers both efficiency and simplicity.

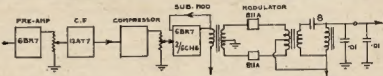


Fig. 4.

The main difference between a clipper and a compressor is shown in Fig. 2. Fig. 2(a) shows a simple clipper circuit. Equal voltages E_1 and E_2 prevent the diodes conducting until the audio peaks reach the same value, when the diodes conduct and effectively short the signal out, resulting in an output waveform similar to Fig. 1(b).

Fig. 2(b) shows a compressor circuit. At first glance it would seem that the back-to-back rectifiers would short the audio out completely, one rectifier shorting the positive peaks, the other the negative peaks; but a characteristic of most semi-conductor diodes is that they still have quite a high resistance in the forward direction until there is considerable voltage drop across them. A curve of this characteristic in a silicon diode, a Ferranti ZS type, is shown in Fig. 3. The curve is typical of all silicon diodes. The value of R determines the voltage at which compression occurs, the lower the resistance, the higher the output voltage peaks. A value of $3K$ is used here and the output voltage is about one volt, peak to peak.

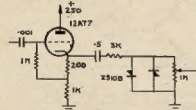


Fig. 5.

A modulation system which has been used at VK5NO for more than a year is shown in block form in Fig. 4, and the limiter circuit is shown in detail in Fig. 5.

Referring to Fig. 4, the method of setting the system up for full modulation is as follows: Looking at the modulation in an oscilloscope, and with VR2 turned on so that the audio wave form can be seen, turn VR1 up until compression becomes apparent, i.e. until an increase in input voltage does not cause a further increase in modulation. After that, adjust VR2 until modulation is just under 100%.

In Fig. 4, the harmonic filter consists of the choke L , which is low tension supply filter choke, and the two $0.01 \mu F$ condensers. One is mounted with the choke, and the other is the sum of the r.f. by-pass condensers in the modulated stage.

Since installing the compressor, there have been no complaints of splatter, even though we live in a Hamwise thickly populated area (although to be fair, both VK5NQ and myself consider ourselves c.w. types and the telephony is not often used). Listening from some distance away the signal sounds clean,

but very thin, and probably we've taken the low frequency cutting in the pre-amplifier further than we need to have done.

We have had several reports that the compression is obvious, and that the background is high, giving the unnatural effect referred to earlier in the article.

However, I consider that compression is the most effective and cleanest way of getting as much modulation as possible on to a carrier.

R.S.G.B. 21/28 Mc. TELEPHONY CONTEST

The rules are the same as in previous years, but the attention of overseas contestants is drawn to the additional bonus for working each additional ten G3 stations irrespective of band. The G3 series comprises the largest single group of U.K. stations.

The Contest will start at 0700 G.M.T. on Saturday, December 3, and end at 1900 G.M.T. on Sunday, December 4, 1960.

An exchange of RS reports followed by a three-figure serial number starting with 001 for the first contact and increasing by one for each successive contact (for example, 58001, 58002, etc.) must be made.

Scoring for overseas stations: Each completed contact with a British Isles station will score 5 points. In addition, a bonus of 50 points may be claimed for the first contact with each British Isles country-numeral prefix. A further 50 bonus points will be scored for each additional ten G3 stations worked irrespective of band.

In conjunction with this Contest, a Receiving Contest is being held, and is open to short wave listeners throughout the world.

Overseas entrants may only log British Isles stations in contact with overseas stations for points. Each complete log entry relating to a British Isles station heard will score 5 points. In addition, a bonus of 20 points may be claimed for the first station heard in each British Isles country-numeral prefix, i.e. G2, G3, GM4, etc., and further bonus of 50 points will be scored for each additional ten G3 stations logged irrespective of band.

Slow-Scanning T.V. with Electrostatic C.R. Tubes

M. L. OLIVA,* VK3ZKC/T

IN Amateur Television equipment, expensive and comparatively hard-to-obtain camera tubes often give way to more modest picture systems. In view of this fact, a flying spot scanner, together with a photo-multiplier cell, is employed to scan transparencies and perhaps still-life scenes. These scanners present certain problems with normal (i.e. C.C.I.R. standard) scanning speeds, but with reduced speeds, such as those encountered in slow-scan experiments, the situation becomes much more difficult when magnetic systems are used.

Flying-spot scanners used by Amateurs usually make use of P7 phosphor tubes since the initial light output from the blue phosphor, ignoring the long-persistence yellow afterglow, is a good spectral match for a photomultiplier such as the 931A which, incidentally, is insensitive to the yellow afterglow phosphor. The electro-magnetically deflected cathode ray tubes themselves were manufactured in large quantities for radar use during the war, and for high-speed scanning purposes normal 70 degree commercial deflection components are satisfactory.

With slow-scanning methods, however, these magnetically-deflected systems are no longer suitable because the standard yokes, transformers, coils and perhaps line and frame output tubes were designed for 30 c.p.s. vertical and 15,625 c.p.s. horizontal deflection rates only, against something like five seconds per cycle vertical and 3,000 to 5,000 c.p.s. horizontal deflection frequencies for slow-scanning.

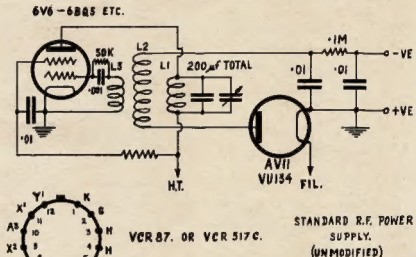
The transformers, unless specially wound for the purpose, can be replaced by cathode follower stages feeding into the yoke directly, but in any case a considerable amount of power will still be lost in driving the inefficient yoke. In addition, a separate e.h.t. system must be used.

Instead of battling with magnetic c.r.t.'s, it is far easier and more economical to use electrostatically deflected tubes. These have no scanning speed restrictions as far as slow-scan work is concerned, and the deflection amplifiers themselves are no more complex than for normal electrostatic c.r.t.'s. The effective electron beam flyback time can also be made much shorter than for electromagnet systems for a given sweep frequency. Depending on the sweep circuits used, the flyback time and rise time ratio of the sawtooth voltage may be 1:50 or less.

More important, however, are the tube phosphors themselves. Cathode ray tubes such as the 5BP1, 5BP4, 5LP1, 5CP1, VCR97, VCR139A, VCR138A, etc., are almost useless for flying-spot scanning because of the relatively long P1 or P4 phosphor persistence (about 300 microsec. up to 30 mill-sec., depending on tube used), the effect of long phosphor persistence being a partially integrated electrical output from the photo-multiplier.

Apart from tubes like the 5BP5, 5BP11, 5JP5 and 12FP7, the only suitable (and also inexpensive) tube which appears to be in reasonable supply is the English VCR87. This radar c.r.t. is considered as hopeless even for experimental television receivers, but its two-step screen can, as with P7 tubes, be used to advantage at the slow-scan transmitter and receiver. The first phosphor layer (electron layer) has a short-persistence deep blue emission, probably in the 3,800 Å. region, against 4,300 Å. for the P7 zinc sulphide silver-activated electron layer emission. The normal long-persistence yellow phosphor layer (glass layer) useful for radar is also present, so that on the whole this tube is not unlike normal P7 radar tubes. At the transmitter the blue phosphor is suitable for scanning purposes, provided that the photomulti-

plier is sensitive to the blue light. The yellow phosphor, which is ignored at the transmitting end, serves its purpose at the receiver by setting up an image which persists during vertical slow-speed scanning, this time ignoring the initial blue phosphor "flash" nearest to the electron gun.



plier is sensitive to the blue light. The yellow phosphor, which is ignored at the transmitting end, serves its purpose at the receiver by setting up an image which persists during vertical slow-speed scanning, this time ignoring the initial blue phosphor "flash" nearest to the electron gun.

One disadvantage of the VCR87 is that it needs between 3,500 and 4,000 volts for a high intensity raster, and naturally enough, the higher the blue light output, the greater the photomultiplier output. If the e.h.t. is too hard to obtain satisfactorily, the gain of the video amplifiers could, of course, be increased, with perhaps an addition reduction in raster size. It should also be kept in mind, however, that the higher the final anode voltage, the higher the deflection voltages for a given raster size.

At least one local (i.e. VK3) manufacturer has a coil intended for a small

3 k.v. r.f. power supply using a power tube such as the 6V6 or 6BQ5. Keep in mind, however, that the greater the final anode voltage of the c.r.t., the higher the voltage rating of the deflection plate coupling capacitors, and when considering that the value of these capacitors must increase with a decrease in scanning speed for a sufficiently low capacitive reactance at the lowest scanning frequency, it is obvious that a compromise must be made somewhere if size and cost are the deciding factors.

Although this coil is intended for 3 k.v. use, it is possible to obtain up to 4 k.v. with certain modifications. The circuit of a typical r.f. supply is shown here. With this arrangement, the voltage output is a function of the oscillator voltage developed across ZL1, and the ratio ZL2/ZL1, where ZL2 is the dyna-

mic impedance of L2 and its associated capacitance shunted by half the d.c. load resistance, and ZL1 is the dynamic impedance of L1 shunted by the reflected plate load. Since it is assumed that no electrical changes can be made to the coil, it is therefore necessary to increase the voltage developed across ZL1 by using a tube (or tubes) having a higher rating than the original 6V6 or similar 4 watt tube, and to operate them with a higher plate voltage. Taking into account the maximum permissible plate current flow through the coil for cool operation, the maximum plate current has been set at 70 mA. A large number of power tubes having a nominal plate impedance of 3K to 12K ohms (audio) should be suitable, and at this QTH a 6N7 with the plates of both triode sections in parallel is used. The coil must be laquered or doped especially between the pies, to avoid corona discharges or sparking between the leads and windings. The whole r.f. supply unit should be effectively shield-

(Continued on Page 8)

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Horizontal Channel: Sensitivity: 0.3 volts (r.m.s.) per inch at 1 kc. Freq. response: Flat within plus or minus 1 db. 1 c.p.s. to 200 kc. Flat within plus 3 db. 1 c.p.s. to 400 kc.

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The Ross Hull Memorial V.H.F. Contest, 1960-61

THE Federal Contest Committee of the Wireless Institute of Australia invites all Australian and Overseas Amateurs and Short Wave Listeners to participate in this annual contest which is held to perpetuate the memory of the late Ross Hull whose interest in v.h.f. did much to advance the art.

A handsome Perpetual Trophy is awarded annually for competition between members of the W.I.A. in Australia and its Territories, inscribed with the name and life work of the man whom it honours. The name of the winning member of the W.I.A. each year is also inscribed on the trophy. In addition, this member will receive a suitably inscribed, framed photograph of the trophy.

Objects: Amateurs in each Call Area (this includes those in Australian Mandated Territories and Antarctica) will endeavour to contact Amateurs in Australian call areas and overseas. (VK1 and VK2 will be considered to be one call area.)

Date of Contest: 17th December, 1960, to 15th January, 1961.

Duration: From 0001 hours E.A.S.T. 17th December, 1960, to 2359 hours E.A.S.T., 15th January, 1961.

RULES

1. There shall be four main sections to the Contest:

- (a) Transmitting, c.w., 50-54 Mc. and 56-60 Mc. bands.
- (b) Transmitting, phone, 50-54 Mc. and 56-60 Mc. bands.
- (c) Transmitting, phone, 144 Mc. band and higher bands.
- (d) Receiving, open, all bands from 50 Mc. and higher.

2. All Australian and Overseas Amateurs may enter for the Contest whether their stations are fixed, portable or mobile.

3. All Amateur v.h.f. bands may be used, but no cross-band operating is permitted, with the exception that the 50-54 Mc. and 56-60 Mc. bands will be considered to be the same band for contests.

4. Amateurs may enter for any or all of the transmitting sections (a), (b), and (c) listed in Rule 1. Separate logs must be submitted for each section (a), (b), and (c), but all contacts must be consecutively numbered in the one number sequence to facilitate checking.

5. Only one contact per band per section is allowed each calendar day.

6. Only one licensed Amateur is permitted to operate any one station under the owner's call sign. Should two or more operate any particular station, each will be considered a contestant and must submit a separate log under his own call sign.

7. Entrants must operate within the terms of their licences.

8. **Cyphers:** Before points may be claimed for a contact serial numbers must be exchanged and acknowledged. The serial number of 5 or 6 figures will be made up of the RS (telemetry) or RST (c.w.) report plus three figures which may begin with any number between 001 and 100 for the first contact and which will increase in value by one for each successive contact, e.g. if the number chosen for the first contact is 053, then for the second contact the number will be 054, for the third 055 and so on. If any contestant reaches 999 he will start again with 001.

9. Entries must be set out as shown in the example, using only one side of the paper. Entries must be post marked not later than one month after the close of the Contest (i.e. not later than Wednesday, 15th February, 1961) and addressed to the **Federal Contest Committee, W.I.A., Box 851J, G.P.O., Hobart, Tasmania.**

10. Scoring for Sections (a) and (b) will be based on Scoring Table A-B for 50 Mc., and for Section (c) will be based on Scoring Table C for 144 Mc. and higher.

11. **Logs:** All logs shall be set out as in the example shown and in addition will carry a front sheet showing the following information:

SCORING TABLE C (For 144 Mc. and Higher Bands)

Band	Intrastate Contacts	Interstate Contacts
144 Mc.	1 point	2 points
288 Mc.	2 "	4 "
576 Mc.	4 "	8 "
Each higher freq. band }	10 "	20 "

SCORING TABLE A-B (for 50-54 and 56-60 Mc. bands)

	To										Other Stations
	VK1- VK2	VK2- VK3	VK4	VK5	VK6	VK7	VK8	VK9	ZL		
VK1-VK2	5	4	2	10	4	6	10	7	10		
VK3	5	4	4	9	10	6	10	7	10		
VK4	4	4	5	10	7	3	7	6	10		
VK5	2	4	5	7	5	3	10	8	10		
VK6	10	9	10	7	10	10	10	10	10		
VK7	4	10	7	5	10	7	10	7	10		
VK8	6	6	3	3	10	7	10	3	10	10	
VK9	10	10	7	10	10	10	3	10	10	10	
ZL	7	7	8	8	10	7	10	10	10	10	
Other Stations }	10	10	10	10	10	10	10	10	10	10	

The score for the first contact with any particular call area on c.w. and for the first contact on phone will be that shown in the Table above. For each subsequent contact with the same call area the score will reduce by one point until the contact value reaches 1, when all further contacts will retain that value.

In addition a bonus of 20 points may be claimed for each new call area worked on c.w. and on each phone band.

Name.....Call Sign.....
Address.....Section.....

Claimed Score: Section (a).....
(b).....
(c).....
(d).....
Total Score.....

Declaration: I hereby certify that I have operated in accordance with the Rules and Spirit of the Contest.

Signed.....
Date.....

Note: Entries on the front sheet must be clearly shown in block letters.

12. The right is reserved to disqualify any entrant who, during the Contest, has not observed the regulations or who has consistently departed from the accepted code of operating ethics.

13. The ruling of the Federal Contest Committee of the W.I.A. will be final. No dispute will be entered into.

14. **Awards:** Certificates will be awarded to the winners of each section in each VK and Overseas Call Area. A Certificate will also be awarded to the contestant returning the highest aggregate score in the three transmitting sections. The VK contestant who returns the highest aggregate score in the transmitting sections and who is a financial member of the W.I.A. will hold the Trophy until the next Ross Hull Contest is decided, and in addition will receive an appropriately inscribed photograph of the Trophy.

GENERAL

Comments and suggestions from contestants regarding the Rules will be welcomed and should be added to the front sheet.

(Continued on Page 15)

EXAMPLE OF TRANSMITTING LOG

Date/Time E.A.S.T.	Band	Emission	Call Sign	RST/NR Sent	RST/NR Rcvd.	Call Area Bonus	Points Claim.	Blank

EXAMPLE OF RECEIVING LOG

Date/Time E.A.S.T.	Band	Call Sign Heard	RST/NR Sent	Station Called	Call Area Bonus	Points Claim.	Blank

NOTE.—The standard W.I.A. Log Sheet follows the above form.

NOTE.—The standard W.I.A. Log Sheet follows the above form.

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FEEDBACK

Hear about the ardent DXer who thought 230VAC was a new country?

★

It is human nature to complain about things not being done, but when a responsible body says this will be done, then does nothing, it leaves itself open to adverse comment. Earlier this year every Amateur was promised a full report of the I.T.U. Conference, but this has never been issued. To my mind this report will now serve no useful purpose because the Ad Hoc Committee on Frequency Review is meeting and they will, or should I say are unlikely to be influenced by this report. It would be better to conserve this money for establishing a fund or create a memorial tribute to the late John Moyle. Publishing a report upon the past I.T.U. Conference is only providing history, not progress. You contributed to this Fund so it is your money, thus you should have a say in how the funds are now to be used. Do you want a copy of this report? If so, advise your Federal Councillor so that a majority rule can say if it is to be published. It is incorrect to say because this was agreed in the past, it must be done. Surely it is commonsense to revise ideas in the light of passing events. The action is in your hands, so discuss this matter at your general meeting and ensure your money is correctly used.

★

That funny man is again on the air. When asked what is 8NT, he replied thirteen. Well you asked for it.

★

What happens to the promised articles in "A.R."? Reading through past issues note that we were promised some details of an early v.h.f. meeting held in N.S.W. What's the matter, waiting for history to occur, or has the matter been forgotten? In addition, note that some articles suggest that they will be followed by further details, but these do not always appear. Why?

★

Congratulations to the Pub. Com. upon the October issue, very good.

★

Emphatically deny that a Yagi is a Hindu Holy Man.

★

Was told that the t.v. man was not amused when an Amateur type told him the sync. was in the kitchen.

★

Have been seeking opinions whether H.F. makes pages pink.

★

Bet that shop is sorry they were so abrupt to the customer who asked for a crystal set. The layman still does know they are called transistors and that shop lost a nice sale of good gear.

★

Hope that they act upon Correspondence and abolish c.w. tests, nothing like complete freedom. C.W. is still the most used Amateur means of communication and has yet to be bettered for reliable working with simple gear.

by EASY.

SLOW-SCANNING T.V. WITH ELECTROSTATIC C.R. TUBES

(Continued from Page 4)

ed because the 8 or so watts of 1 Mc. stray r.f. energy may creep over the back-fence. As an alternative to r.f. supplies, voltage doubling arrangements if you have the components, are equally suitable.

Another electrostatic tube, the American 3FP7, seems to be available only in VK2. This three-inch P7 phosphor tube is of the post-deflection acceleration type, and has the disadvantage of requiring 4,000 volts for post-acceleration. Under normal circumstances, it appears that the tube operates quite well even without this 4 k.v. potential, the post-acceleration electrode being connected directly to A3. With normal electrode voltages, the deflection sensitivity is 250 volts/inch (d.c.) for one set of plates, and 180 volts d.c./inch for the set closest to the electron gun. These voltages are approximately three times those required by the 5BP1 for the same deflection arc, giving some idea of the deflection voltage amplifiers required.

The VCR317C, which is by no means in plentiful supply, has similar phosphor characteristics to those of the VCR87, but this tube needs only 2-3 k.v. under normal conditions and can thus be used with the usual VCR97 tube networks.

Apart from the 3 inch and the two 6 inch tubes, there does not seem to be any others suitable for slow scanning, whilst still having long persistence afterglow-type screens for the receiving end. In this respect, the short persistence P5 and P11 tubes are only useful for the transmitter, a long persistence tube being necessary at the receiver in any case. One P7 tube can therefore be used both for scanning a transparency and displaying an image, with simple switching for the two functions.

Fortunately the 3FP7 has an almost flat face-plate, but the English VCR series have a relatively short radius of screen curvature. This necessitates the use of a flexible transparency which can be spread across the glass surface, otherwise edge defocusing and parallax effects will result.

Little need be said concerning slow-scan circuits themselves, these being more or less the individual's preference, but assuming that the slow-scanned image is to modulate a narrow band transmitter (the narrow bandwidth [4-10 kilocycles] of slow scan systems being their main advantage), then there are sure to be some difficulties with integration and differentiation networks and the circuits with which they are used. Accordingly, the single-tube synch. separator, be it a double triode or not, may have to be replaced with two or three valve circuitry, where the synchronising pulses are separated, shaped and amplified, passed on to a control tube, and finally the oscillator themselves. In view of the overall narrow bandwidth of this system, this should not be a great disadvantage. The synchronising pulses, whether used for closed circuit or transmitting work, can be obtained from asymmetrical multi-vibrators in the usual way. ●

EARLY COPY DATE

All correspondents are reminded that with the approaching Xmas Holidays the copy date for the December and January issues will be strictly adhered to. Copy for the December issue must be at P.O. Box 36 by 8th November, any copy received after that date will be carried over to the January issue.

Copy for the January issue must be at P.O. Box 36 by 1st December, as the printers' Xmas shut-down requires an early issue of January "A.R."

Your co-operation in observing these dates will greatly assist all concerned. Regrettably we cannot accept copy received after the specified date, so please post in adequate time, remembering the additional heavy load the Post Office has at this period of the year.

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2052	80	290 265	115 TAP 105	4.3 C.T.-2.35	25	2 2	3 1/2	2 1/2 x 2 1/2	2 1/2 x 3	VLM 31
2052	80	290 275	135 TAP 125	4.3 C.T.-2.35	29	3 3	3 1/2	2 1/2 x 2 1/2	2 1/2 x 3	VLM 31
2064	125	340 315	135 TAP 125	4.3 C.T.-2.35 4.3-2.35	16	4 13	3 1/2	2 1/2 x 2 1/2	2 1/2 x 3 1/2	VLM 34
2065	130	390 365	115 TAP 105	4.3 C.T.-	6	5 10	3 1/2	2 1/2 x 2 1/2	2 1/2 x 2 1/2	VLM 34
2066	190	390 365	125 TAP 105	4.3 C.T.-	6	7	6 8	3 1/2 x 2 1/2	4 x 3 1/2	VLM 34

*Note: Effective Transformer Series Resistance referred to Secondary

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SIDEBAND

Bud Founsett, VK2AQJ
22 Seiffert Circuit,
Queensbeyan, N.S.W.

OLD FAITHFUL

Let us look at the 807 linear amplifier. There are several ways in which you can use this old favourite or its brother, the 12X5 which is the 12-volt heater version. You have the choice of operating it in Class AB3, as Class B, as a grounded grid stage, or in the ZL and G2MA linear amplifier circuits.

Linear r.f. amplifiers do not have to be operated in push-pull designs like their audio counterparts. The reason being that the plate tank circuit supplies the missing half cycle by its fly-wheel action. This means that we can use a single tube or a pair in parallel.

As a Class AB3 amplifier, the 807 gives good output and linearity, but suffers from a couple of disadvantages. The grid bias voltage must remain constant under all drive conditions and the screen voltage regulation must be good. This calls for voltage regulators, a "stiff" bias supply and adds to the sources of trouble and expense. Fig. 1 shows an 807 used as an AB3 amplifier—very conventional.

A swamping resistor is required in the grid circuit of an AB3 amplifier. The fact that grid current is flowing only over a portion of the cycle makes this necessary. The load presented to the Class A driver amplifier is variable without the swamping resistor. The swamping resistor presents a steady load to the driver and is usually about 5,000 ohms non-inductive and of about 2 watts rating.

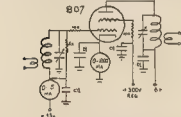


Fig. 1—807 as a Class AB3 Amplifier.

There are two other ways in which the 807 can be used and I really cannot find any real disadvantages in either. Firstly, there is the ZL linear (Fig. 2) designed by Peter and I, and ZLIJAA, and then the G2MA linear—again taking its name from its designer, David Marshall, G2MA, who is to be heard on twenty regularly. The circuit for the G2MA amplifier is shown in Fig. 3. Note that the difference is in the method of obtaining clamping tube bias. In the ZL linear, bias is developed across the i.k. grid resistor, while in the G2MA amplifier, it is obtained by rectifying the r.f. drive with a diode and developing the voltage across the clamping tube grid resistor. By having the grid of the r.f. amplifier and the grid of the clamping tube isolated from one another for d.c. in the G2MA circuit, only a small amount of negative voltage is required to bias the r.f. amplifier to cut-off, if this is required.

In adjusting these circuits, I have found that by moving the slider on R1 until about 15 mA. of plate current is flowing with no drive given good results are obtained. As a clamping tube although several other tubes would be suitable, such as 6V6, 6Y6, 6F6, 12A6 to mention a few. An EASO makes a good diode although a crystal diode rated at, at least, 100 volts peak would be most suitable.

I have shown an ordinary tank circuit in the diagrams, but there is nothing to stop you from using a pi network in your rig as long as you design it properly. This goes for the tank circuit also.

MORE R.F. IN THE ANTENNA

None of us would use poor impedance matching in a hi-fi amplifier. In the circuits says 10,000 ohms plate-to-plate, we go to great expense and trouble to ensure that the output transformer meets our requirements. Not only

does correct impedance matching mean less distortion, it means maximum power transferance to the load and cooler tubes.

If we have 150 watts of d.c. input to our final amplifier and only get, because of poor design, 50 watts in the antenna, what happens to the other 100 watts? It is heating our final tube, and with summer upon us, it is sheer waste. Even if our final amplifier tube has a plate dissipation of 50 watts, the tube is being run at 100% above its maximum rating. Does this shed any light on why that expensive 6145 did not last very long?

The answer to all this is so very simple. All that is required are a few simple calculations—hi, come back here, it is not that hard. All you need to know is the plate load impedance of your final amplifier tube and the rest is easy. The tube manual will tell you the plate load you get from the conditions for audio service. Divide the plate-to-plate figure by 2, if your amplifier is single-ended.

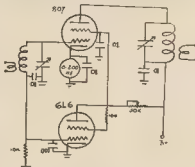


Fig. 2—"ZL Linear" using an 807.

Let us consider that our final requires a plate load resistance (Rp) of 4,000 ohms. The formula states that

$$\text{Reactance (XL or XC) equals} \\ \text{Plate Load Resistance} \\ \text{Loaded Circuit Q}$$

so for any frequency, assuming a Q of 15, the reactance is 4,000 divided by 15, or 266 ohms.

Now to find the inductance of the plate tank coil for 14 Mc. We can consult the reactance chart in the Handbook or work it out from this formula:

$$L \text{ (in microhenries) equals } \frac{XL}{628 \times F}$$

where F is in megacycles.

The capacitor required can be found from the same chart or it can be derived from:

$$C \text{ (in pF.) equals } \frac{1}{628 \times F \times XC}$$

where F is in megacycles.

The coil works out at 3 microhenries and the capacitor at 0.00045 pF. or 45 pF.

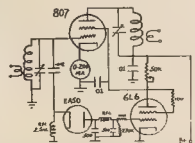


Fig. 3—"G2MA Linear".

As the capacitance in practice is rather difficult to estimate due to stray, I find it simpler to get the inductance of the coil correct, then the capacitance looks after itself. A grid-dip meter and known capacitance will make this job simple.

Remember, too, that should you decide to use two tubes in parallel the plate load reactance is halved, thereby halving the inductive and capacitive reactance of the tank circuit

components. This has a significant bearing on their value—work out the sums and see for yourself.

The calculations for a pi network are a little different but are just as simple and straightforward. The inductance is, for our calculations, divided into two parts but, in practice, is one coil. Fig. 4 shows a pi network. R_p is the plate load resistance, while R_o is the output impedance of the network to suit the transmission line to the antenna or coupler. This is usually 50 or 75 ohms. The reactance of L1 and C1 are calculated as in our previous tank circuit.

XL1 equals Rp divided by Q, and as the inductive and capacitive reactances are equal at resonance, so XC1 will be the same as XL1.

To calculate XC2 use the formula:

$$XC2 \text{ equals } -R_o \left(\frac{R_p}{Q^2} \text{ plus } 1 \right) - Rp$$

To calculate XL2:

$$XL2 \text{ equals } -R_o \text{ plus } XC2$$

Therefore XL equals XL1 plus XL2.

Now that the capacitive and inductive reactances are known, reference to the reactance chart will give you the required values for the frequency involved.

IN HOSPITAL

Harry VK4JZ has been off the air recently due to a spell in hospital. He should be up and around in no time, especially as Harry has the watchful eye of Dr. Leo, VK3AC, upon him.

Up there in Townsville, VK4DD has had quite an operation. No doubt many have wondered why that loud signal has been absent from 23 m. But on information from VK4MF, another Townsville, John is making steady progress.

On behalf of all the sideband gang I wish you both a speedy recovery.

VOX RELAY

Have you had any difficulty in obtaining a suitable relay for voice control operation Arch VK3BW suggests you use the high impedance relay that is found in the 8C96 I.P.F. unit and available from disposal sources. This coil has a resistance of 13,500 ohms while d.p.d.t. contacts are available. This relay would be suitable for use in the control circuit that appeared in last month's notes and you will have a spare set of contacts for switching out the voice coil in your speaker or maybe controlling your antenna change-over relay.

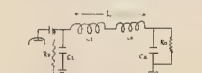


Fig. 4—Pi Network.

VS13V

Up there doing a tour of duty with the Australian Army Signals Unit is John VS13V. Hailing from Wangeratta, Vic., John is always pleased to be asked to give a signal and being rather a rare ab. prefix, this usually means going without contacts from much further afield. After John signs with you, listen for the dot-dot that develops.

His present s.b. tx is quite unusual as it employs transistors in the low level r.f. and audio stages. The 9 Mc. McCoy xtal filter helps in the generation of the s.b. and after the transistors, a 6AU6, 6L6 and 6AV6 in a ZL linear circuit take care of the signal. John has plans afoot to use transistors right up to a pair of 614 tubes in AB1 and should be using this new rig by now.

For receiving at VS13V, an ARS which has been completely re-built, does an adequate job, while a 20 m. 13 ft. spaced cubical quad antenna picks the signal in the right direction. By the way, if you haven't worked John at VS13V, you may have talked to him when he was at Penang in Malaysia signing 9MGR.

ROBERT CASTRO, TERC

It is with deep regret that we record the death of Robert, TERC, on 1st August, 1960. Bob was well known among sideband operators throughout the world by his good manners, interesting rag chews and keenness and excellent signal. He will be sadly missed by his many friends far and wide.



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University 3" C.R.O. TVR-C3	£56
B.W.D. Forascope 300	£86/5/-
Tech Multimeters	£2/4/-
Tech Valve Tester	£15
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Unit C: power transformer, PT1896, 80/5 ea.

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Amateur Radio, November, 1960

John C. Pinnell, VK2ZE
15 Summit Avenue,
Earlwood, N.S.W.
Phone: IW 4248.

Sunspots come and sunspots go and with them the great waves of DX activities build up to a peak and then recede to much lower levels. As the years go by the difference between the highs and lows is much less marked due to several causes, among which are: better amateur radio water proofing of amateur population, and the many DX-peditionary expeditions, where Amateurs are not permanently active. Before World War II if you passed the 150 mark you were up among the best DXers. Today it is different; 200 countries worked is fairly common and even the 300 mark has been attained.

Perhaps in the not too distant future we will be able to eliminate most of the sunspot effects by using microwaves and bouncing them off mirror balloons in orbit. This has already been done. We are told that there will soon be many mirror balloons in orbit and that at least one will always be in a suitable position, day and night, to bounce microwaves off the sun.

We Amateurs look on these u.h.f. waves as mostly suitable for "line of sight" communications. Who knows? They may be the DX bands of tomorrow, with greater space for our expanding numbers to spread into.

NEWB AND NOTES

VRXKD. Christmas Island, cards are now on their way to the world bureaux or direct if I.R.C. accompanied the requests. The first log sheets from Ken have reached his QSL manager K5ADQ, who is doing his best to despatch all cards as early as possible. K5ADQ, Nikki Boyd's address is: 2771, 34th St., Los Alamos,

2C5AE has been very active over the past few weeks and his policy is to QSL 100% via bureaux. A packet is sent each week via airmail. He does not wait for receipt of incoming cards. One I.R.C. is not enough to send a QSL at postcard rate from British North Borneo. Single I.R.C.'s are passed on to a local children's home.

New activity on Aland Island by two novice class operators is reported. OH8NE and OH8NF are both crystal controlled and work between 21090 and 21150 Kc. and 7030 and 7050 Kc. Being novices, their power is limited to 15w.

JZ0PO is the only active Amateurs in Netherlands New Guinea as all others have returned home.

Phonies: Ed KXSCA, who has been quite active on 15 mhz c.w. is a pirate, reports the real KXSCA, who operates only 30 mhz. Also ZMTDA was heard calling CQ on 15 mhz c.w. well after the DX-pedition using that call was

Gene UJKEAA in Tadzhik has been very active early in the morning (1700s) on 21 May.

Walter DL9PF will operate as LX1PF in the s.w. portion of the "CQ" DX Contest.

Information concerning the call sign DM5DA/
ZNA in East Germany, there are club stations

and individual stations. Previously, club stations were identified by the letter "K" following the numeral. Now, club stations are recognized by the numeral, followed by the letter "X." The "K" that may appear in a DM3 call no longer indicates that it's a club station, but rather that the operator is the club's controller. Thus, K of that operator is the club. At a club station is a licensee holder (the director) as well as other station users. The director of the station is authorized by the FCC to operate the DM3. For example, the Rostock club station is DM3DA when operated by the director. The other operators of that club station have three call letters, such as DM3DA/1, DM3DA/2, etc. The two letters are the basic club sign, DA. Thus at Rostock the operators would be assigned DM3DA/1, DM3DA/2, DM3DA/3, etc. The club sign, DA, is placed backwards in the call through the dispatcher backwards. If the club

station has more than 35 operators, going through DM3ADA, then the prefix DM4 comes into force and the process repeats. Thus, now, DM3KDA would indicate operator "K" at club station "DA".

Heinz Wetzer lives at Stralsund and works at Rostock and is associated with clubs at both places. At his home club in Stralsund he signs DMXZNA, and when operating the club station in Rostock he signs DMXDA/ZNA.

ULTJA, Kazakh, is now on a.s.b. with 200 watts and a ground plane antenna. He has been worked on 14320 Kc. around 1730g. He speaks good English.

Those who are chasing the W.A.S. certificate usually find Vermont the most difficult state to work. An expedition to that state was made early in August by KIASJ, KIGMB, KJHX, KIGMC, and KILFJ with very gratifying results. They were all so pleased with the results that plans are being made for a return trip this month (November), and also possibly during a DX Contest.

ZD8AM, Gough Island, has been worked on about 14035 Kc c.w. He is a new one and he said he will QSL 100%, but it will take many months for an exchange of cards as the next mail is not until March 1961. His address: ZD8AM, Gough Island, C/o G.P.O. Capetown, South Africa, via Tristan Da Cunha, South

It was understood that Ian ZL4JF would be leaving Campbell Island to return to New Zealand in November. So far no replacement has been found to take his place so now he will probably have to stay for a while longer.

K8CQV/K8S, American Samoa, has been active of an evening around 0900z, daily. He will call 1000z.

Somali Republic.—There are only three active stations from this country at the present time. SO1TUF is in the southern region of the republic, and SO2AB and SO3GM in the northern region.

WOCVU is helping to arrange for an expedition to operate from the Orange Free State (ZSA) in South Africa, to put this rare spot on s.b. for the first time. Although not a separate DXCC country, it will be excellent WPX material and a necessity for anyone wanting the All-Africa Award. Details of dates

PYTLJ is active almost daily from Fernando De Noronha. He is mostly on 21 Mc. c.w. and can usually be found around 21050 Kc. between 1900 and 2300.

There are two Christmas Islands, one in the Indian Ocean with the prefix ZC3 or VK3, it counts separately for DXCC. The other counts with Fanning Island as DXCC and the prefix is VR3. VR3KD is fairly active from this location and can be heard on phone and c.w.

Ocie HR10S is being transferred to the U.S. Embassy in Cambodia. He will leave Honduras for his new assignment probably in the first week of November.

Rundy plans to operate as FLTZA, French Somaliland, from December 8 to 12. (HB9J)
 SNIGW has moved from Nepal to Delhi, India. This leaves SNICJ, SNISM and SNIMM still active from Nepal.

Have heard several stations calling ACSCQ but have been informed that no Ham operation is legal from ACS at present. This means there will be no official ACSCQ activity.

CIAAK worked 8/28 says his QTH is "Peking home of true communism" and his name is [redacted]

R. J. Baty, ex-VK2ANB, is now operating on Norfolk Island, using the call sign VK2ANB. He hopes to be active on all bands shortly.

Dominica should soon be a new a.s.b. country. This will be made possible by the delivery of a a.s.b. generator to VPIDA by WJAYD

DECEASED ADDITIONS

dated August 1, 1990, or later.
Niger Republic—Confirmations must be dated
August 3, 1990, or later.
Voltaic Republic—Confirmations must be dated

August 3, 1990, or later
Ivory Coast Republic—Confirmations must be dated August 7, 1990, or later
Tahiti Republic—Confirmations must be dated

August 11, 1980, or later.
Central African Republic—Confirmations must
be dated August 12, 1980, or later.
Congo Republic—Confirmations must be dated

August 15, 1960, or later.
 Gabon Republic—Confirmations must be dated
 August 17, 1960, or later.
 French West Africa and French Equatorial

So far no one seems to know the prefixes or exact areas of the above new DXCC countries, though two that appear clear and apparent at the moment are **FF1** Mauritania, and **FF4** Ivory Coast Republic.

ACTIVITIES

Some reports have been arriving too late to be included in the notes for the month intended, and, therefore, have been delayed until the following month. To reach the publishers on the 8th of each month it is necessary for me to post them on the 7th. It takes about ten hours to arrange and type the notes, so please let me have your contributions early. I must have a week-end for the job as I work back three nights a week, and at other times may

Col YBEAQU has been active on 14 Mc. s.a.b. with 50 watts to a doublet antenna and under a period of two weeks worked: DJIMJ several times, JA3LJ, KC4USH (Haller Base Two), KQKNA, ICHHDRI (7 Mc.), KLFFAZ, WETACR, VKNMT, VRBD VRP, WAUCA/XCB, VEFGC, RYBZ, etc.

Rich VESAREX, using a ground plane, worked on 14 Mc. c.w.: BV8HP, CTJLY, EPIAD, FA-ERJ, ETJAZ, HPISB, HZIAE, HSIR, ICJIN, MI/WABPD, ORATZ, OXSUD, UMBZY, UPERAF, etc.

Wally WELLS, who has been very busy, has heard several South Americans during the afternoons at the week-ends. Also Africans are coming through on 7 Mc., early mornings. Since coming back on the air in July 30,

Eric's music is still going plenty, also getting the cards. A card direct from ZPFGG gave him QSL country No. 357 Eric is well known among the world "listeners" and has been mentioned in several overseas publications. The latest is a Russian magazine containing his telephone call in his native language heard? Zc.cw: w.e. JAs. Ws: 14 Mc. phone: G3NNT. MZJR: 16 Mc. c.w.: BV3HT, EPJAD, FBXCC, FKRAH, FKCAI, GRBCAM, HILKT, YKQVH, KWBW, LUSU, KXW, KXW, KXW, MW4BEP, SV0VO KCE, VKXTT VKPEP, VQOHE VRIL VSSEEM, VPQQQ, VQDIA, VQ-SBC, VUZRN, XZTHF, VYSANG, ZKIBS, 4XANX.

LAIRFM, LAIRFM.
 LAIRFM active on 14 Mc. c.w. and
 worked RCVB, KQ4AT, YQ1HT, FY1YJ,
 VR1L, XE1P3, and heard HB3GT, UL7KAA,
 ZL1JF, VU7JZ, VS0AA.
 Dave L543B is using a regenerative receiver,
 IN5 detector followed by transistor audio
 amplifiers OCT, OCT, and a pair OCTs. This
 setup is doing slightly job. Stations
 heard, c.w., 3.0 Mc. SPB2T; 14 Mc. UA4UHC,
 GW4WB, UA5UL, LIML, W5NMX, 21 Mc. c.w.,
 and News and Notices during the day UA1BE, UA4IF,
 KL7AMS, KOTTF/KW5, UG4WH, OH5OR, GW-
 4, and K4LAC during the evening.

George VKIAOM, generally speaking, found conditions on 14 Mo. phone better than for many months past. He had many contacts which included: CNOCS, GJFWB, GINNT, TI-BOEM, VEIIE, VELAUB, VESSEY, VESKG, VK-0932, VYBANT, WELLY, WESKAC, WESKAL.

FRN, VK9AB, KXIL, XZRG, YNIWW
Frank VK9QL was active on three bands.
1 Mc c/w worked GILET, ZSNE, VQ4HT,
ZEJW, FB8XX, FK8AT, 14 Mc c/w, worked:
FRJED, IHH8OT, 5A2CV, YUTLAA, ICIIN, TI-
2CMF, MI/JIN, VQ15C, VQ1HT; heard: MI/
WBPD, EPJAD, EP2AY, EQ1AT, HP1BK,
PQ6HW, 21 Mc c/w worked: VQ8BC, VQ4HT

heard: ZDLW, TGIA.
VKIZR found the 21 Mc. band wide open
over long periods of the day for about 13 days
early in the month. 73 DX stations were work-
ed including VBRX, YVJAS, SP7HX, ZSDR,
VU2XG, ZS6NE, ZS2OB, ZC4PH, EA1BC, 11MD,
GM3NFM, UBSKCD, OD5LK 14 Mc c w work.

and 51 contacts. SPIQD, GIGCRY, OHSFF, HBSYN, HILMI, GWKSKQ, HASCFC, OKGRO, YOTDL, LUJWU HP1BR, etc.

Ray VKSRK has been active on 14 Mc. c.w. and has worked DJ3BH, K14B, KL7R, KM-SHI, Z19Y, G6GM, G6YQ plus Ws and many others. He also enclosed reports from SUX

and 5GM. Among those worked on 28
Mc. phone were CR1BC, FK8AU, G3CLW, JA-
TQB, JA3ACT/MM, K8CT, KA3QJ, K3PKX/
KH8, KL7DIR, OH3SM, SM7BS, UA3QBU,
UA0DZL, VZ5GN, VK9RM, VK0WH, VETBBO,
WARAJ V88AJW, ZE1JJ, Z8ZYK, Z81PV, and

George VK8RX is hoping IC1IN and UT5CC will count for DXCC purposes to add to his 253 countries already worked. His 14 Mc. cw list worked includes: VR8L, IC1IN, UT5CC, ZL3VR, FB8YF, PX1FF, YV4AU, LUIDEN, LUNEL, EA7CP, ZBL, SPKDNW, GMSFFX/A, numerous DLs and Gs.

My thanks to Don Chesser for the use of his excellent "DX Magazine" and to the West Gulf DX Club Bulletin for valuable information. Also thanks to the VK gang who supplied notes. 73 John.

Amateur Radio, November, 1960

CORRESPONDENCE

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

LEGAL POWER LIMIT

The Editor suggests that those Amateurs currently using above the legal power limit case this practice, as if they do not do so, then the next letter will no doubt not be a request but a demand from other quarters.

Listening around the bands it becomes evident that a few Amateurs are using a well known piece of commercial gear "barefoot," then feeding this into a type of final. As the commercial gear already has the permitted power input, then the final must be exceeding the authorised limit, and no one will be fooled by the statement that these few are "running 100 watts average input." So chaps, you are requested to note this suggestion and act upon it in the spirit in which it is offered.

—K. M. Cocking.

A.T.V. NEWS

Editor "A.R." Dear Sir,
I have endeavoured to write the A.T.V. Notes for some time now. Due to illness in the house I will be unable to continue with the notes. I do hope someone will be willing to take on the job.

I would like to take this opportunity to thank all those who have sent in news to me of their a.t.v. activity, and hope they will continue to do the same to whoever takes on the notes. I am sure that those who do not co-operate as was expected I do appeal to them to assist in the future.

While not wanting to enter the controversy on a.t.v. I feel I must say that the letter in October "A.R." was not with my knowledge. The following books may be found helpful to anyone starting on a.t.v. gear, such as a flying spot scanning.

"An Introduction to Amateur Television Transmission," by Michael Barlow: 7/6.
"Electronic Notes for the Constructor," by E. N. Bradley: 7/5.
and for the more advanced, when building a v.v. camera,
"Closed Circuit and Industrial Television," by Edward M. Noll: 4/7s.

I would be pleased to hear from anyone interested in a.t.v. I am on 7.1 Mc most days at 1230 and 1800 hours.

—W. A. Brownhill, VK3BU/T.

DIATHERMY INTERFERENCE

Editor "A.R." Dear Sir,
Noticed a letter in October's "A.R." re diathermy interference on 2. Reed ZK3RU remarks. I heartily endorse this gentleman's remarks, and would like to point out in particular one such device which is causing severe interference on the 10 Mc Band.

Reports have come from South Africa, New Zealand and various parts of VK5 and I have personally been asked to report through the local Advisory Committee about it, but apparently officialdom prefers to ignore same.

It appears to originate in the Melbourne area. It wanders up and down between 2.8 and 2.875 Mc, and has been in evidence in nearly every band opening to VK3 over at least the last two years.

Apparently, we have to like it or lump it.

—Bob Elms, VK6BE.

S.W.R. MEASUREMENTS

Editor "A.R." Dear Sir,
I wish to take exception to the article in October "A.R." "S.W.R. Measurements with the TABR." For Tribune Australia. In this article, the whole of the curves and interpretation of them is based on the quoted formula:

S.W.R. equals

Forward power plus reflected power

Forward power minus reflected power

This formula is not correct. The correct formula to use is

$S.W.R. = \frac{I + J}{I - J}$

where I equals forward current and J equals reflected current.

The quoted example of S.W.R. equals 100 plus 100 is 100 minus 20 to give an S.W.R. of 1.8 to 1, should read: S.W.R. equals square root of 100 plus square root of 20 divided by square root of 100 minus square root of 20 equals 1.8 to 1 divided by 4.7 to give an S.W.R. of 3.25 to 1.

The other example quoted S.W.R. equals 1.2 to 1 should in fact be S.W.R. equals 1.25 to 1.

Another point is the location of the measuring device, the assumption being that the measuring device was inserted into the feeder at the transmitting end.

In this case a correction factor should be used to correct for the attenuation of the feeder (which at these higher S.W.R.'s will not necessarily be negligible) both for forward current and again for reflected current.

—C. B. Edmonds, VK6AE.

MONOR CODE

Editor "A.R." Dear Sir,

If Mr Roth Jones (October "A.R.") honestly believes that a.s. is languishing and will soon die, I'm afraid he is deluding himself. From the tone of his remarks I would suggest he has had one eye removed and replaced by a phase-shift network.

A tune over 14 Mc. any night of the week will prove to him that c.w. stations outnumber a.s.b. by roughly 4 to 1. Apparently a few Amateurs still enjoy using c.w. which should be sufficient reason for its retention.

As for his suggestion re the re-allocation of frequencies, what is wrong with his a.s.b. gear? The a.s.b. addition to the 10 Mc. half the bandwidth is required so that their 75 kc. should be more than adequate—being the equivalent of 150 kc. of a.m. or c.w. allocation.

Incidentally, just in case you are accused of being one-eyed, I may add that I operate a.m. and c.w. on all bands to 144 Mc. I have nearly completed a 20 Mc. a.s.b. rig for 14 Mc. (I did not find it necessary to buy the latter ready-made.)

—Bob Elms, VK6BE.

[Owing to lack of space in this issue, other letters on the same subject have been held over until the next issue.—Editor.]

THE ROSS HULL MEMORIAL V.H.F. CONTEST, 1960-61

(Continued from Page 7)

RECEIVING SECTION

1. Short wave listeners in Australia and Overseas may enter for the Contest, but no transmitting station may enter.

2. Contest times and logging of stations on each band are as for the transmitting sections.

3. To count for points, logs will take the same form as for the transmitting sections but will omit the serial number received. Logs must show the call sign of the station heard (instead of worked), the serial number sent by it, and the call sign of the station being worked.

Scoring will be on the same basis as for transmitting stations. It is not sufficient to log stations calling CQ.

4. A station heard may be logged only once per calendar day on c.w. and once per day on each phone band for scoring purposes, but additional reports will be of value to the F.C.C.

5. Awards: Certificates will be awarded to the highest scorer in each VK and Overseas call area.

—

NEW RATES FOR HAMADS

The Publications Committee advise that as from the December issue of "A.R." Hamads will be charged at the minimum rate of five shillings an advertisement of thirty words, which is a reduction on the previous rate.

All ads. must be accompanied by payment and additional words will be charged at twopence a word. No phone ads. will be accepted, nor will receipts be issued as from 1st December, 1960. This change has been made to simplify office routine, and reduce the cost of advertising, as the survey indicated the majority of ads. contain approximately thirty words.

VHF

(Continued from Page 14)

of modifying it for 4 m.x. The power input will be low (approx. 5w.), but he should be heard quite well. Mobile activity generally VHF and 2 m.x. has been good with VK3 SZDR, SZAW, SMK, SZAF, ZAXX-5 and ZBQ heard regularly. Brian STN is on almost every night sending m.c.w. for the benefit of Al SZCH and Joe SZWH who are intending to add 1 m.x. and 2 m.x. Two metres hasn't altered much except for one new 3 m.x. station, Brian STN, who has had several cross-band duplex conversations. Al SZCH is perfecting his new 2 m.x. converter which features two c.c. mixer stages and an i.f. tuned by an MN26C Compass rx, making triple conversion in all. When completed it should be the ultimate in 2 m.x. rx's. Brian STN is the latest to have 1 m.x. c.c. gear and has worked several stations including VK. SZH on his portable trip into the country. Ken SZCH is another regular 1 m.x. contact in Elizabeth.—VK6BG (ex-ZBZB).

WESTERN AUSTRALIA

The last fox hunt was provided by 6BE and Les Cloud, the lx being hidden in a mountainous portion of Lesmurdie. Roy 6BZB was the first to find the fox. The hunt was by Super followed at the home of Les and Rao Cloud in Kalamunda. DX lived up on 6 m.x. during the month of Sept. JA being worked on 80, 15th, 17th, 18th, 19th, 20th, 21st, 22nd, 23rd, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st. Since then there has been four fair openings. The 1st, I worked eight JA stations in the 80 minutes I was home. Band was still open to RLKA Russian tv. (two stations this time) when I arrived home. At 1915 I worked three JAs on evening TX scatter. This was the second TX opening in a fortnight. The 3rd, I was coming in weakly at 1500 W.A.S.T. and it appears likely that JAs could bob up at any time. RLKA and RLKA have appeared and at colossal strength on several occasions. Unfortunately interference from ABW Channel 2 renders it impossible to resolve pictures from Russia in Kalamunda.

Jan 6CL is back on 6 using a rhombic over the 120-mile path to Perth. He has also been working the JAs with the 6CL. The 6CL Perth operators. Jack 6BU is back on the breeze with a brand new v.f.o., 818 tx, which appears to work well. Several of the boys have gone interstate, both Cecile and Noel. 6ZBG using translocator converters with very good results. Brian SZBH has found new contacts in Geraldton and Perth. He hopes to have his 150w. back on 8 within a month. JA working should be particularly good from that location.

A new 6 m.x. call 6CX has appeared on 8. Hope you have a good time on the band. OM. Ross 6ZBK was most unfortunate in missing the 6 m.x. c.w. for the full ticket. Thought that he missed the receiving, so didn't attempt the sending. Got a slip from the authorities, "Receiving, pass; sending, not attempted. It will be necessary for you to find a new 6 m.x. call." Ross, start again! Bill Wedemeyer (my protégé) goes for his ticket in October. If he can't get his my 6 m.x. already has an imposing home grown listening group. His latest is a home built turret tuned converter (as per "A.R.") which runs six bands from 3.5 to 30 Mc.

T.V.—Francis 6WD has joined the square eye company and is trying his hand at v.t. watching over a 160-mile path. I believe that he is one of the best of the square eye boys. He is having some trouble with "fringing" hair in his picture but whether this is the set or the tx is open to conjecture. 6VK informs me that something may be done in the line of a.m. on 28 Mc. In the near future though nothing definite can be stated at present. Incidentally, as now some of the boys are working 6 m.x. v.f. is now under the roof of 6HK and some use of the call as a beacon will be made during DX periods. Frequency is 56.001 Mc.—VK6BE.

"A.R.'s" ANNUAL ISSUE

October "A.R." is available from the Victorian Division for 2/- a copy and additional copies can be supplied as long as stocks are available. All requests to Administrative Secretary, P.O. Box 36, East Melbourne, C2, Vic., enclosing money with your order. Act now and obtain your spare copy. The previous special issue is now a collector's item, so don't miss out this time on your spare copy.



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PREDICTION CHART, NOV. '60

No. E. AUSTRALIA — W. EUROPE S.E. Mo.		Mo.	
0	2 4 6 8 10 12 14 16 18 20 22 24	45	28
45	28	21	14
21	14	7	0
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GMT			
E. AUSTRALIA — W. EUROPE L.R.			
0	2 4 6 8 10 12 14 16 18 20 22 24	45	28
45	28	21	14
21	14	7	0
7	0	45	28
E. AUSTRALIA — MEDITERRANEAN			
0	2 4 6 8 10 12 14 16 18 20 22 24	45	28
45	28	21	14
21	14	7	0
7	0	45	28
E. AUSTRALIA — N.W. U.S.A.			
0	2 4 6 8 10 12 14 16 18 20 22 24	45	28
45	28	21	14
21	14	7	0
7	0	45	28
E. AUSTRALIA — N.E. U.S.A. S.E.			
0	2 4 6 8 10 12 14 16 18 20 22 24	45	28
45	28	21	14
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7	0	45	28
E. AUSTRALIA — N.E. U.S.A. L.R.			
0	2 4 6 8 10 12 14 16 18 20 22 24	45	28
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21	14	7	0
7	0	45	28
E. AUSTRALIA — CENTRAL AMERICA			
0	2 4 6 8 10 12 14 16 18 20 22 24	45	28
45	28	21	14
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E. AUSTRALIA — S. AFRICA			
0	2 4 6 8 10 12 14 16 18 20 22 24	45	28
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21	14	7	0
7	0	45	28
E. AUSTRALIA — FAR EAST			
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45	28	21	14
21	14	7	0
7	0	45	28
W. AUSTRALIA — W. EUROPE			
0	2 4 6 8 10 12 14 16 18 20 22 24	45	28
45	28	21	14
21	14	7	0
7	0	45	28
W. AUSTRALIA — N.W. U.S.A.			
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W. AUSTRALIA — N.E. U.S.A.			
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W. AUSTRALIA — FAR EAST			
0	2 4 6 8 10 12 14 16 18 20 22 24	45	28
45	28	21	14
21	14	7	0
7	0	45	28



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Follow s.w.l.'s, here is your scribe once more, with the news and activities of the VK s.w.l. I hope the bands have been kind to you in the way of DX. If so, why not write me a letter so that all s.w.l.'s. know what you have heard. While you are about it, tell me something about yourselves and your equip-

Did you like last month's page and a half? I would say it is the first time in history that the s.w.i. page has gone over one page. It shows that I'm getting what I ask for and that's news of and about you; so keep writing to me.

I haven't had any queries re the S.w.I. Convention next year. Who is going to be in it? Have received one photo for inclusion in next month's issue. We of the s.w.i.s. hope that there will be a lot of logs entered in the VK/ZL Contest. This item of news will be of interest to you all.

Awards—It was decided at the 1st VKC general meeting to establish two award certificates to all world-wide s.w.f.s. Firstly, H.A.V.K. (heard all VK). This award will be issued to the holders of 12 cards; they should comprise of VK1 through to VK8; two from any VK9 area, and two from any VK0. Secondly, the VK S.w.I. DXCC, which will be of 100 cards from any 100 different countries. More details of these awards in next issue.

THE HEAVENLY 3

Albury Rifle Club.—Down in this corner, there is not a lot of listener activity, but it is noted with satisfaction that one of the members, Mr. J. H. Smith, has been elected to the R.D. Center. His score of approx. 360 points is very good going for a newcomer to the sport. It is noted that Mr. Smith has made his shack available to the club for their Friday night meeting and his mode of operation is very commendable. It is noted that the number of Amateurs in this town, Herb Fordquist assists in a similar manner and it is noted that there are two such willing helpers, one of whom, despite his advancing years, patience, still continues to hold the fort. C.W. Instruction is in the very able hands of Art

VK3--Official reports from the VK3 Group are very rare these days. Listening to the Sunday broadcast from SWI, one could be excused for thinking that all the Group was doing was listening to the radio on the radio, was assisting the Division with bulletin folding and such tasks. Now I am not trying to belittle the work of these fellows who assist Norm in the various tasks around Atchafalaya, but I am sure that about 90% of what is being done in the listening line. The VK3 Group has the biggest list of issued listeners' numbers--300 according to the Call Book--three times more than the VK3 Group, but do

You chaps in VKX land would be the first to growl if I stopped writing this page. I and several others are trying to build up the s.w.f. group in VK and so that this day you can have a chance to help. Amateur will take your position alongside other Amateurs. And whilst you are s.w.f.s what you will learn will help you to become good operators. So please do not stop helping. I will help you. You. Just remember that W.I.A. Amateur organisation which, if the commercial people had their way, would be out of existence. Support for the group has always been hard to come by for commercial reasons. Amateurs have been organised and not supported.

It is understandable therefore that the Secretary and his fellow workers become disappointed at the lack of interest in their efforts. What about it chaps, support your Group more fully even if you don't agree entirely with them. Give the Secretary a bit more help instead of leaving it for the other fellow to do. I am, in case you don't know, Secretary of the V.K. Group and I get plenty of support from our President Mac, our Asst. Sec. Tom, and we function quite well. So hop to it lads, you will end it all to your advantage.

VELL—Frosty Fraser is to be congratulated as well as his recently obtained M.R.O. and 52 ft. 10 in. antenna, as on the Contest of the month (number of countries heard on a s.b.) he heard 54, which was a mighty fine effort. Yours truly ran a very close second with 52. Mac, our President, 47. There were quite a few logs entered, which was very pleasing to note. Bert 3ZGD is donating a trophy to Frosty at our next meeting.

About three weeks ago a dozen of us went to the Geelong Amateur Radio Club Exhibition. Quite a few of us came away with sore throats, because of the very nice range of air conditioning that was provided. The exhibition was enjoyed by all. At the last general meeting 12 s.w.f.s. were present and we discussed and passed the two awards. At the next meeting the organising committee will map out our next twelve months of activity on the 30m band. The award for the transmission of a Morse message to Mt. Dandenong and we spent two pleasant and interesting hours and we know how we receive that one-eyed monster's signal. Our thanks go to V.R.F. for the opportunity to visit the exhibition.

When Hayward is going to put up a beam, which I think will look like an Indian's bow. It's to be constructed of bamboo. I have put up two W. Windham type antennas, actually, one on the east and one on the west. I have a switch arrangement to go from one to another.

YKS: Their last meeting was held at the Wesley Hall, Mt. Gambier, but owing to school holidays some of the members had to leave the district. There were six A.W.'s present and after the meeting they visited SKU, St. Pankras. Whilst they were there, he made contact with WAACG on c.w., but didn't have

Fred L5020 received a letter from a W.I.A. member in Adelaide, wanting to join the ranks of the a.w.s.'s. And at the present the member is using a 5-valve dual wave, but hopes to receive a Bendix shortly. Colin has now been sent to the States to get a new transmitter. He is running a 100-watt 800 kc. transmitter, and is armed. His rx operates on 10 mc—not good, but it is a snifter. He puts in a P.S. and I quote: "While at 3MS' shack this Sat. afternoon, Dale L5025, Trevor L5030 and myself had the pleasure to have words with Steve L5027. He thought I was a little bit of a nut, but only been on 18 months; put out a terrific signal into Australia." He sure does Colin.

WVZ.—The new Secretary of the WVZ S.W.I. Group has written to me and his name is Michael Jenner, from New Norfolk. Thanks for the letter Michael. It is pleasing to know that you are all still alive down there! It's good having a lot of correspondence don't you think? I have heard of a lot of letters and have another head, ha, then I would keep up with it all. I've been that busy this last two months that I have only sent out two a.w.I. reports. Anyway, Michael makes mention of the following. They have quite a few Hens in interest on go for the boys over there at the moment.

Every second Sunday morning he is going to pull a bit of news over the W.I.A. broadcast personally, so that they are a little more interesting than the local news. He will give a few lectures and a visit to the P.M.G. Monitoring Station on the hook. It looks as though the next few meetings will be very interesting. Michael goes to say that the main trouble about attending the time is the rain, which is turning up each meeting night. What's wrong with your s.w.s.? Thought you liked visits and lectures. What about turning out to them now? The speaker has a K90ser serial matching and r.f. amplifier unit plus a 6 mx converter. The antenna is a half wave folded dipole on 48 ft. mast. The speaker says that if you don't come for your first letter, there is no one to come.

15 W. 42nd St., New York, N.Y. 10018

It is with much pleasure that we can announce that one of our regular contributors, Colin Hutchinson, 15631, was the outright winner of the N.Z.A.R.T. Memorial Contest this year. It is most pleasing to see one of the younger members having success of this nature. The results are more impressive for the reason that Eric Trebbcock was second and Don Granlley third. Congratulations Colin.

you in the VK-2L.
Bill Edwards, K9MXL, of Indiana, and his
mother, K9RUS, have both passed their genera-
lism, and are now on the air on most bands,
including 6 mx. Both will QSL OK and any
reports can be sent via Don L3088 at Box 148,
Albany.
DX activity these days has gradually moved
to the s.b. segment of 20 mx and some of
the prefixes heard there are really rare re-
gardless of which mode you prefer. The S.S.b.
contest which is being conducted currently

by the VKS Group has brought to light some very interesting calls, so we suggest you new comers listen some time in that part of the spectrum. It is necessary to have a h.f.c. on your rx to receive them, however don't hesitate to fit one, for your efforts shall be well rewarded.

CORRESPONDENCE

[illegible]

"Re last article in "A.R." some sarcastic comment has been tossed this way re my comments on ground planes. Now we all know these things are not a good rx antenna, they are too noisy, OK? Well this miniature effort is really good in the country, I have proved it. It's not too good where there is noise, but this article refers to Mr. Eaven McElroy, which was evidently read in form of man made interference. In fact I am going to use it for 10 years, in due course."

Kevin Wain, L3089: "I feel that I ought to tell you of my experience in Army camp as a cadet signals operator. Being of some rank, I had a lot of influence. I was the only one to have had at my disposal the crankwelder, I don't know if you have heard of a WSA510, containing in all nine valves, four tx and five rx, and I was the only one to know how to use it, from 1.5 to 10 Mc. through two bands. Of course the tx depends on its serial for range, and I was the only one to know how to use it, simple it is, whip in fix'ing. However, when used in conjunction with the provided dipole, the serial range is increased to 75 miles on s.w. and 100 miles on n.w. I was the only one to use it on 2645 Kc. The other net used 8325 Kc. Besides the WSA510's control used 81 sets at the time, I was the only one to know how to use it. My supervisor, the Major and Major, I was the only one to know how to use it."

A bit of news from L3041. Scores up to date heard 870 countries, 40 zones all time. For 1980 heard 156 countries, 38 zones. QSLs from 28 countries, 40 zones all time. 1980, 107 countries, 34 zones. Mailed 1,187 reports so far in 1980. Has had 879 QSLs so far this year. He has made 233,179 log entries all time. As of 1980 has logged 12,557. He quotes the following QSL: "I received a QSL from W3FV 7367 21475 Campbell is W2IA/WF, OXIDLD, LXDPD, CMAAE. In passing, I heard W2JEP the first day he went on the air, and the first a.w.r. to log him. He's had 100 a.w.r. reports since the first day UASOU sent me a write-up on me in Russian, CKA Russian magazine."

DISCUSSION

On 3.5 Mc. L3030 heard SP9DY; that's the only one logged on c.w. And L3042 confirms that 3.5 Mc. and c.w. practically nil.

14 Mc. L3039. 7 m. in the a.m., UA4KHC GSHWB, UASUL I131L G3NMX. L3045: M1, GSHWB, QGVHV I131L GMTI, YV6AN, YV8L I131L G3NMX, UA4KHC, YK5SR, YK5SR, FKAAI, SVOWO Creta, ZK1BS, BV5PT, YU, SRN, H1SKT. From L3074: G4, I131L, CR, SRN, UBS1B, F8D, VQ4QT, VP5DC, CN8G3, HC1FG. S.b.: K6CQV/K89, Z5SCZ, KG4AA, LX2MF, SH8LL, ZP1AK, U8RFF, U8JAF, I131L, G3NMX, G4, SV1, H8R, and plenty of G4. L3077 heard plenty on a.b., but no one on c.w. Heard plenty on a.b. in countries all told, but won't name them here as time is on the wing.

XI MA: L3030, evenings up to 2130. Novice
and Ws during the day UAIB, UAIF, LA, G
JAIB, UGAW, OHEA GWISQ, UAOC
TAMC, DIXAC. The presumption of
L3011, L3012, Gs, plenty of
new country for him. FRZD, YNIVW, HB
SVW, VSSGS, SMEDQ, TQGSU, CKIYM, CR
SAM is just a few he has heard.
XII MA: L3074 reports quite a lot of JA
and ZSS coupled with a couple of ZSS
this morning. The QSL Leader as this
month, I will delete the QSL Leader as there
are only minor changes. Hoping to hear from
you all shortly. 73, the best of DX, Maurice

NOTES

FEDERAL

N.Z.A.R.T. CONVENTION

The 1961 Convention of the New Zealand Association of Amateur Transmitters (Incorporated) will be held in Hamilton (N.Z.) from Saturday, 2nd June, to Monday, 5th June, 1961, and any V.A. Amateur travelling abroad in New Zealand during this period will be most welcome advisers J. O. Sanders, ZL1AUW, Secretary of the Convention Committee.

Because there may be a shortage of accommodation in Hamilton during this week-end, Mr. Sanders advises any interested VAs to make an early booking. Details may be obtained from Mr. Sanders by writing to P.O. Box 638, Hamilton, N.Z.

V.V.A.

Some interesting comments in relation to t.v. by Amateur transmitting stations have been received from VK2HIS, Mr. E. M. Fawkes, and may assist other Amateurs in tracking down interference.

Mr. Fawkes says: "During my investigations into the problem of T.V. it has become obvious that very little trouble occurs from direct pick-up or break-through at the intermediate frequency of the I.v. Receiver and that a high degree of suppression of harmonics radiated from the transmitter is necessary where there is interference from other television channels, e.g. the 3rd harmonic of the 51 Mc. band on Channel 3. The degree of trouble is of course directly related to the strength of the weak signal."

"One form of interference that I do not recall reading of occurs when the I.v. receiver incorporated a considerable amount of negative feedback to the speaker while in the first audio stage. Direct pick-up on the speaker leads occurs and is fed into the audio amplifier where it is rectified and reproduced by the speaker. This is not to be confused with the fact that it is not affected by any setting of the receiver volume control."

Another problem can be quite severe if caused by direct pick-up at the input to the video amplifier and should there be any long unshielded leads in this part of the circuit, there is interference from transmission in the 0.5 Mc. band may be expected. Use of the normal type of shielded hook-up wire in the video input circuit is not possible as the performance of the t.v. receiver.

T.v. is a problem which we shall all meet some time or another and it is a challenge to the experience and ingenuity of the Amateur to find the causes and effect a cure. Information from Amateurs which might assist other workers to come to a solution for this problem is gratefully received.

A.S.C.B. REPORTS ON ITU

The Australian Broadcasting Control Board in its twelfth annual report to the year ending 31st June, 1960, made comment on some points arising from the Radio Administrative Conference of the International Telecommunications Union held in Geneva, 1959, which can have a direct bearing on the bands allocated to the Amateur Service. This is printed herewith for the interest of Amateurs.

A Radio Administrative Conference of the International Telecommunications Union was held in Geneva between 17th August and 21st December, 1959, and the Board was represented by the Australian Delegation by Mr. W. W. Hatfield. One of the principal tasks dealt with by the Conference was the revision of the Radio Regulations and the International Radiotelegraph Code (Atlantic City, 1947), which include the Table of Frequency Allocations providing for the allocation on an international basis of bands of frequencies for the various radio services including broadcasting, which covers both sound broadcasting and television. The tremendous growth in radio services over the intervening years, together with the requirements of entirely new services, such as Space Research, Radioastronomy and Ionospheric and Tropospheric Scattering Systems, provided extremely difficult problems in the allocation of spectrum space, particularly in those portions of the spectrum having long-distance propagation characteristics.

"As a result of the Conference, the following changes which affect broadcasting and television in Australia are contemplated—

"Medium-frequency 535-635 Kc.—This band, which was previously allocated to the Mobile Service, is now shared by the Mobile and Broadcasting Services in Region 3, which includes Australia.

"High-frequency, 1,360-1,510 Kc.—This band, which was previously shared between the Broadcasting and Amateur Services in both Region 3 and 4, will now be allocated exclusively to broadcasting in both regions.

"Very-high-frequency.—The bands allocated to broadcasting in Region 3 in the Atlantic City Table were confirmed with the following variations.

(a) 87-100 Mc. is now allocated to the Broadcasting, Fixed and Mobile Services, instead of exclusively to Broadcasting as previously.

(b) 170-218 Mc. is now allocated to the Broadcasting, Fixed and Mobile Services, in lieu of 170-300 Mc. in the Atlantic City Table. (In Australia portion of the band 202-208 Mc. is allocated to the Aeronautical Radionavigation Service.)

"The frequency bands of the ten v.h.f. television channels reserved for television purposes in Australia are all included in the new Geneva Frequency Allocation Table and associated footnotes. However, the allocation of the band 138-157 Mc. for research purposes in Space and Earth Space projects, and a move towards eventual allocation of the band 133-136 Mc. to the Aeronautical Mobile (Rural) service on a world-wide basis, may involve reconsideration of the use of Channel 6, 133-139 Mc., for television. Within television Channel 7, 181-188 Mc., the band 183.6 Mc. plus or minus 0.5 Mc. is allocated on a world-wide basis to Space and Earth Space services for research purposes, subject to no harmful interference being caused to other services.

"Ultra-high-frequency.—The band 500-630 Mc. has been allocated exclusively to the Broadcasting Service in Australia, except for the portion 565-616 Mc. which is shared by the Radionavigation Service on a secondary basis. The Radioastronomy Service may use the portion 565-616 Mc. until such time as it is required by the other services to which it is allocated.

"Super-high-frequency.—The Conference allocated the spectrum beyond 1,930 Mc. to the Amateur Service in the Atlantic City Table (1947), up to a limit of 40,000 Mc. In this new spectrum space, broadcasting is allocated the band 11,700-13,700 Mc., shared with the Fixed and Mobile Services.

"High-frequency Broadcasting Plans.—Nine draft high-frequency broadcasting plans, for different seasons and three periods of the 11-year sunspot cycle, were prepared by the International Frequency Registration Board (I.F.R.B.), for consideration by the Conference, with the object of substituting orderly planned use of the available channels for the rather chaotic conditions existing at present in the frequency bands allocated to high-frequency broadcasting. These draft plans did

not find general acceptance and considerable time and effort were spent in examining various proposals. It was decided to revise the technical standards upon which the plans were based and an increase in the width of the frequency bands was suggested in order to meet satisfactorily all the requirements submitted by countries. Neither of these major proposals was adopted, nor were the various countries able to agree on a revision in their stated requirements, with the result that the Conference was unable to adopt the I.F.R.B. plans. It was therefore agreed to look on other means of achieving the more orderly use of the high-frequency broadcasting band. The method finally adopted, which is a scheme of 'frequency management', is based on the concept of 'current usage', instead of the concept of 'requirements' forming the basis of the draft plans. In the operation of this scheme, the I.F.R.B. will receive quarterly from each country the detail of proposed usage for the coming period, and, by co-operation between administrations, it will produce schedules of operation by which harmful interference between transmissions will be reduced to a minimum. It is hoped that in the operation of this scheme over a period of years, a clear pattern of actual usage will emerge, allowing the production of acceptable plans on the basis of actual usage.

"Technical Standards.—In view of the increasing congestion throughout the spectrum and the consequent need to employ the most advanced techniques over a period of years, the space occupied by emissions, and also any spurious emissions, the Conference adopted new standards for Frequency Tolerances and Spurious Emissions, wherever appropriate, which these will be incorporated in the Board's Technical Standards.

"Early Issue of Regulations.—The new Regulations, including the Table of Frequency Allocations, are intended to come into force on 1st May, 1961, with the exception of that section relating to the 'frequency management' of the high-frequency broadcasting bands, the first schedules of which became effective on 4th September, 1960. On 19th May, 1960, the International Union of Pure and Applied Physics decided that it would establish a special Committee to conduct a review of frequency allocations to all classes of approved users in Australia, and to report to the next I.U.P.A.P. Geneva Conference Table and its relevance to Australian conditions in the radio field."

FEDERAL QSL BUREAU

Would all concerned please note that at 19th September, 1960, the QSL Bureau was changed as follows: A.S. BH, CK, DM, ED, GB, GC, GH, IB, ID, IT, JC, JH, JM, KB, KB, OF, PM, RL, SC and WH. (This information from the QSL Bureau.)

Advice is still awaited re disposal of QSL cards for VK0CK, JC, JH, KB, NB, RL. It is appreciated that if anyone keeps cards with Antarcia could secure the required set of information and pass same on to undersigned. GSWP advises that he finds the W.I.A. 1960-61 V.A. Book of little use as it is not the most useful, and wishes to thank VK3WS for sending a copy to him.

QSL cards from VK0RT have now been distributed according to BH VK0EG (Any further queries re this Antarcia station cards can be directed to BH).

Now please note the Nigeria QSL Bureau address is now: C/o, Dr. M. Dransfield, Reg. Research Station, Samaru/Zaria, Nigeria. From 1st August, 1960, the Korean nationals prefix changed from HA to HLA (HLA prefix for American Forces remain as before). QSL Bureau address unchanged at Box 162, Seoul, Korea.

—Eric Trebilcock (EXRS196), Act. QSL Mgr.

NEW SOUTH WALES

An extremely interesting lecture was delivered by Mr. Peter Griffin, of the Department of Regional Development, at the September meeting in Science House. The subject was "V.H.F. Omni Range (VOR) and Peter explained the system to an interested audience. The vote of thanks was moved by Max MPT. Divisional activity since the time of writing the last notes has been highlighted by the Branch of the Hunter Branch and the South West Convention and the V.h.f. Spring Field Day. The Hunter Branch and V.h.f. activity are covered in other pages of this magazine. Only the South West Convention will be reported by this contributor.

The Eighth South West Convention was held over the bank holiday of October 1 and 2 at Wagga. Senior Vice-President, Max MPT,



"Better put it back together; here comes the Supervisor."



Early birds at S.W. Convention (Saturday morning). Left to right: John ZEDM, Ron Pullerton, Bruce IFM, Bob ZET, Harry ZAPT, Tim ZETM, Dave ZDE, Max ZETM

and Councillors, Harold ZAAH and Tim ZETM, represented the Divisional Council.

The Convention opened on the Saturday morning at the Postal Institute, with registration, rag-chews, followed in the afternoon by a visit to the Post Office for an inspection of the telephone equipment. The evening activity commenced in the Guides' Hall with the Convention Dinner which was chaired by Jim ZAOO. Some sixty persons attended the dinner during which the Deputy Mayor of Wages, Aid White, officially opened by Convention. The toast to "The Wireless Institute of Australia" was proposed by Ross IFN and the address was delivered by Max IFM. At the conclusion of the Dinner, the party repaired to the Postal Institute to enjoy film.

Activity commenced on Sunday morning at 10 o'clock with a 3 MX sudden Tx Hunt which was won by Keith ZAAA with Zedy IVP second and John Weldon filling third place. Back to the Postal Institute by 11 o'clock for the assemblage listened to the Divisional broadcast, part of which was conducted by Harold ZAAH from the home of Stan ZAD.

After the broadcast came the disposals sale and then lunch. The early afternoon from 1.30 p.m. till 3 o'clock will be remembered by those who participated in the all-hand scramble as the event of the day. Ross IFN selected a good site near the reservoir, and although winner of the event with 18 contacts, experienced some interference from Harold ZAAH who was located some 200 feet away on the opposite side of the water tower! Neither operator was aware of this until after the event. Second and third places were filled by Bill ZABY and Don ZRS, both with 14 contacts.

Back again to the Postal Institute and cars were loaded for the 3 MX hunt which was won by Keith ZAAA with Ross IFN second.

Final event of the Convention was the Blindfold Tx Hunt which was won by Mrs. Mills in the ladies' section, with Dave ZDE recording best time amongst the men.

After the blindfold hunt, prizes were presented by Max IFM to the placemen already mentioned and to others as follows: Lady travelling greatest distance to Convention, Mrs. Hens ZYGL, from ZAGM, from Unkarig, great travelling greatest distance to Convention, Assoc. Peter Barter, from Orange; the fox, Lindsay ZELS.

A minor convention was held at the home of Lindsay ZELS on the Sunday evening. Rag-chewing and supper were the main events and it was not until well after midnight that the curtain fell on the Eighth South West Convention.

MOBILE OPERATION

On Sunday, 18 October, some of the 1 Mx mobile gang got together for a family picnic and day's mobile work. A meeting place was arranged at the Cole River where all members of the various families enjoyed themselves

eating, swimming and rag-chewing (which includes brain-picking, hi)

With so much interest in this branch of the hobby, increasing efficiency of the rigs over the last several years is very evident.

Those present were VKO, ZKO, ZSW, ZWJ, IFM, ZCK, ZVL, ZBE, ZVO, ZHX, ZADA, ZAAAT and ZASY (all mobile); ZLS and ZAPQ were also there, but not as yet radiating mobile r.f.

STUNTER REMONCO

Alan Fairhall, VKXKB, at our September meeting, gave a very interesting colour slide talk of his journey to the West Indies, Bangkok, Singapore and Japan. Alan, with his inimitable flow of rhetorical description, kept the interest from start to stop. Even Bill ZXT, who had been bent away from had that far-away look in his eyes and I would not be surprised to see him again travelling north, even if only to stay at a Japanese hotel.

Those noticed in the audience were VKS ZCS, ZKT, ZAYL, ZANG, ZRU, ZALA, ZDOF, ZRS, ZALK, ZEL, ZER, ZGN, ZL, ZAAJ, ZAGS, Wrens, Suberland, Bailey, Robbs, McInchance, Ford, Corli, Anderson; Meadames Fitten, Adams, Collett, Bailey, Rose; Miss Fitten and Masterson.

Les ZRJ was congratulated on passing into the ranks of the Benedicti, whilst our visitors from Gosford—Major and Mrs. Collis—were that day celebrating their thirty-first year of conjugal bliss. A glance at the roll-book affirmed a suspicion of mine that Zulu Lulu was only half there.

The most merit for the month at Billy Hall's place was well attended for a change and all enjoyed themselves except ZEL as the only thing he could not were the spot, before his eyes. Early in the evening the ZAL ZARK had decided to form a gourmet club with himself, ZEL and ZAGS as foundation members, but alas the argument between a Chinese mandarin and Bill's stomach was a losing battle for the latter and the Club was disbanded forthwith. Congratulations to Ian Fyfe in passing the exam—of call.

Cavestates, Capers.—Although the attendance was not as high as last year it was nevertheless as every bit enjoyable—the food was good, the company was excellent and the speakers were excellent. After Major ZRU said Grace, the boys bucked in and did themselves proud, especially the girls on my left who had, for the most part, been good and behaved well about the place. The toast to the visitors was proposed by Branch President, Lionel ZCB, who, in return, which was a very good idea, ZBA, in proposing the toast to the P.M.G. and local Members, delved into his youthful days of communications, around about 800 B. In a more serious vein, I suggested that Amateur Radio could become a means of combating the problem of juvenile delinquency and that serious thought be given to encouraging the young squirts to join the ranks of hamdom.

Mention was made of the Radio Inspectors of his acquaintance, Bill Crawford, Tom Armstrong and now George Riley, and he said that neither he nor I had heard anything of these gentlemen and their efforts to work in with the Amateur fraternity. Of Alan Fairhall, VKXKB, I heard that he was in the States. Wal said, "We all know the stirring work he did in connection with the battle of the frequencies, even if you don't read 'Hamrad'." In response to a question from George Riley said he had a lad an Amateur, and fully appreciated the troubles of the Amateur. George mentioned a rumor that he had seen an increase of 145 in the ranks during the year. There is a disturbing decrease in the number of active members, a state of affairs that should not continue if we wish to retain spectrum.

The toast of Amateur Radio and the Wireless Institute of Australia was given in the hands of Divisional Councillor, Dave ZEO, who said he was very sorry to see that there were quite a few local fellows absent this year. We have to forfeit something to persons who, thing worth while and no doubt quite a few percent could think up a reasonable excuse to be absent but made that little extra effort and sacrifice to be present and put back into our hobby a little from which we gain so much. Divisional President, Bill Lewis, ZYB, responded and stated that he was from the fact that VKS Division often appeared to be complaining a lot as it showed that we are active and alive. Thanks were expressed for the stirring work of the late John Miley and Alan Fairhall in connection with the I.T.U. The guest speaker, Max Hull ZLS (Federal President), then announced the adoption of a back-draft of a schematic plan of the Administration of the Institute. Max gave an interesting and informative probe into Federal matters and as he spoke for 30 minutes I can



Sunday morning, S.W. Convention. Left to right: Max IFM, Don ZKJ and harmonics, John ZELJ, Lindsay ZELS, Darcy ZADM.

only give a few pertinent points and pardon me if I appear to be rambling (blame the sausage rolls I had).

The main man," said Max, "on your committee is the Federal Council, at point missed by quite a few and he must be of two parts thinking Federally not Divisionally. Quite a lot of time is wasted by individuals writing to P.M. on matters which should and must be presented by your Councillor. Amateur Radio does not do enough nor spend enough to foster the young chaps. Boy Scouts for instance would be an excellent group, being interested in communication, to instill the spirit of the Amateur.

Continuing, Max said, that he couldn't understand the attitude of the P.M.G. Department in refusing to allow us to speak the language of the country in which we are in contact as the good book of the I.T.U. states that we must speak in plain language which does not necessarily mean English. When F.A.S.C. showed us 30 untranslatable what they thought of the Amateurs it was decided to approach the late John Moyle to represent us, but he refused. I was even in the best of health then and pressure of work was with him, however with the help of Pierce Healy and others, John was prevailed upon to change his mind, which he did, where the seriousness of the situation was revealed.

A lot of criticism has been directed at F.I. in not releasing early report from John whilst at Geneva but I think they were sub judice and unable to be released. It was a remarkable fact that no mention was made at Geneva on the action of the jamming stations with their useless cluttering up of frequencies—apparently it was too hot to handle.

At long last we have a representative on the committees called Ad Hoc which really really stands for Radio Frequency Allocation Committee and to date has had one meeting. Our main concern is to see that the bands are used to the fullest extent and it is hoped that when a request is made like the one concerning a copy of logs, it is replied to promptly, even though it may appear to be silly to you at the time. From now on to minor requests may be made at short notice, so back up F.E. in your own interests. Concern is also felt that due to the increase of 2 channels, low frequencies are being neglected to a dangerous level so it behoves us to encourage the limited licenses to get a full ticket and so occupy more of the Amateur frequency user knocking on the door is the television boys who, as the number of stations increase, so will the order for more frequencies increase. In conclusion, Max gave us a target to work for—every Amateur makes an Amateur and so double the ranks.

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Reg. Ross, VKJAL, Secretary

Stuart Z2DF, our Nelson officer, rose to thank all those who helped in the slow Morse transmissions and to pay tribute to our Honorary Secretary, Gordon Sutherland, on whose shoulders \$9.9 per cent. of the work of this Convention fell. Finally, Lionel thanked all those for their presence and closed the function. As far as I can determine, the following were present: VKS Z2S, Z1J, ZALJ, ZKQ, ZANU, ZVL, ZAGR, ZAKT, ZQZ, ZKJ, ZTE, ZART, ZCV, ZVL, ZZMO, ZZJR, ZAKE, ZRJ, ZAYL, ZZW, ZAHU, ZGV, ZARA, ZAGD, ZAKX, ZEL, Z2DF, ZALM, ZMK, ZKT, ZRU, ZALA, ZAPQ, ZFO, ZCL, ZADS, ZSP, ZSA, ZCS, ZAGR and Messrs Hamilton, Bailey, Sutherland, McEae, Foster, Robertson, James, McLachlan, Russell, Stankus, Riley, Pollock.

Next day the Blackall's Field Day was enacted where for once it forgot to rain, but the wind was cold as Jack Hamilton was not kept as busy as he had hoped—however, you did a good job, thanks Jack. Unfortunately having vialder trouble, I have not all the results as I left before they were available. However, Z2DF won both 144 hertz, punners-up being ZAHU and ZANU in the first, with ZANU and ZRJ in the second. Bill ZXT won a 7 meg something or other ZAIM's spouse naturally won the ladies' quiz. I know that because she rang me from Dora Creek to tell me, but who won the others I haven't a clue. However, for those interested the information will be in my next month's edition. There were several at Blackall's who were not at the dinner and these included two members of the Goon Show in the persons of Arthur Z2F from Inverell and Bill Z2O from Sydney—they were joined by Ivan ZAIM, ZEL and ZAGR.

Next Branch meeting at University of N.S.W., Newcastle, will be held on 11th November at 8 p.m.

VICTORIA

This month the notes are being written by John SAKS, who has taken over from Peter Z1Z as Divisional Sub-Editor. In future, please send notes, club notes, etc., direct to J. B. Battick, Bayview Rd., Frankston; telephone is Frankston 34178, as John is also script writer for the weekly broadcast he would welcome all the news and views from VKC Division, both for the broadcast and "A.R."

Well, as I was rung up and asked to take on this job on the deadline day for copy, this month will be only a token effort. However, in future we hope to keep up a regular "newcomer" column. Please let me have your news and views either on the phone, on the air, or by letter. No news, no notes—no keep me informed, please.

MONTHLY MEETING

This was attended by about 40 members and a visitor, Henney OZTH, from Copenhagen. Kel Cocking, VK3ZPQ, gave us an excellent talk on cascade converters, high frequency crystal filters and receivers generally. He plans to publish the results of his findings re these aspects at communication soon, so we'll look forward with interest to reading about toroids, pole-zero spacings, shape factors, etc., all of which have been included in the project Kel has been associated with over the last few years. Many thanks for a very fine business lecture. Sorry for you blokes in the country who couldn't get along, and sympathy to the fellows in the city who could have come, but didn't.

ANNUAL STATE CONVENTION

The Victorian Division's Annual State Convention will be held on Saturday and Sunday, 5th and 6th November at Maldon. An extensive programme for both days has been arranged. (See advertisement elsewhere.) Maldon is 84 miles from Melbourne, 11 miles from Castlemaine. Even if you can't make it for the two days, try to get there for the Sunday activities. Be seeing you!

ANNUAL DINNER

All VKS Amateurs, and Interstate visitors, are reminded that the Annual Dinner will be held on 25th November at Scott's Hotel and an early reply to your invitation will greatly assist the organising committee.

This promises to be a gala occasion—be in it! Hope you remembered to send back the slip off your ticket. Did you?

COUNCIL BRIEFS

Miss Foster, our Admin. Secretary, has left, but a worthy replacement has been found. The necessary formalities to reorganise our Division's finance have been taken by Council. The original mortgage on the building has

been discharged and replaced by a loan from the Commonwealth Savings Bank.

That's about it for now, but I'll be chasing news, both for the broadcast and the notes—please keep me informed. I guarantee not to lose anything you send me nor omit it! I'll even keep copies of scripts to include in "A.R." How about that! It'll be nice to hear from you soon, zone correspondents.

EASTERN ZONE

Vhf activities will be the main feature of these notes for the present as your correspondent has yet to build t.v. generators for the lower bands. As was reported previously, zone skeds are held on 3 mhz every Thursday and Sunday evenings. The best effort to date was the 8 p.m. session on Sunday, 2nd Oct., when eight stations answered the roll-call. One point worthy of special note is that George Z2CO, now at Koo-wee-rup North, was exchanging S8+9 signals with Peter Z2DF and myself in Sale over a 90-mile path for several hours.

Other stations involved were ZDY in Maffra, Z2AR in Traralgon, Z2AQ in Warragul, Z2BV in Morwell, and Z2JM in East Warragul. Several of these stations have poor locations in the easterly direction and reflected path signals are used, particularly by Jim Z2JM, for reliable contacts. Z2JM is at the foot of the Mounth Hills and to work into Sale and Maffra he fires his 18 watts per medium of a 10 element yagi at Mt Erica to the north east. Very steady signals off the mountains are received here normally running around 5T.

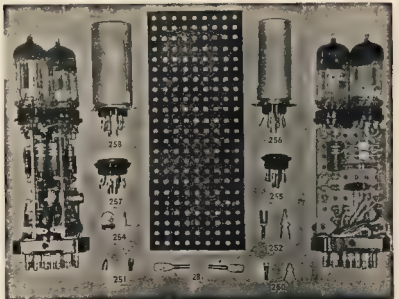
This is a point worth considering by those Melbourne stations who consider Mount Dandenong too big an obstacle in the Gippsland direction—ever heard of obstacle gain?

CHIF ZAIT has been very quiet on 3 mhz of late—probably chasing more contest honours or new contacts on the h.f. bands. He reports that the electricity supply in pool be connected so farwell to whining generators, flat batteries and filament switching.

ZDY has become very active on vhf and can be heard regularly looking for Melbourne stations on 3 mhz. How about it you city folk, we want to keep him active on vhf. He will have 8 mhz near very soon. I hear rumours that Morwell High School Radio Club is springing into action—how to hear you fellows on the bands soon. The club activities are not limited

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to purely Amateur Radio and extend to quite a few fields associated with electronics. ZZZP reports bearing Melbourne stations working across town on 40 m, but unfortunately not making any contacts.

SFO has been worked by ZCCQ who now appears to have an ideal location for working in both Melbourne and Gippsland. Heard SFO myself on 27th Sept. Just above the very high noise level. The 2 m x gear is running here most evenings around 8 p.m. With the advent of warmer weather it is hoped to have as many as twelve stations in the 2 m net and scramble will be held on the third Sunday of each month from 1948K to 2000K. The Eastern Zone awakens, so please stay awake! -3ASW (ex-3ZBR).

WARRACKNABEIL

Our Annual Zone Convention will be held in Rainbow this year. As yet, we have not selected a date as continued wet weather has compelled us to wait until the elements are more likely to favor us with a fine week-end.

Trev 3ATR (Warracknabeil) is at present in the happy position of having the S.E.C. power being connected to his property. Guess Trev will have his own automatic supply connected so as to take over, should on those rare occasions the S.E.C. fail.

Kalou 3AT has completed his new rig and now only waiting on the erection of antenna so he will soon be in "business" again. Zone hook-ups continue to be well patronized, so thanks a lot chaps for your continued interest.

SOUTH WESTERN ZONE

This month we are deeply concerned to learn that Leigh 3H has been taken very ill. The Zone wishes you a speedy recovery, Leigh, and we are hoping that it won't be long before your cheery voice is back again on 40 m.

W.I.C.E.N. practices are progressing but attendances are small due to perhaps the lure of the DX bands. Several stations were active during the heavy rains and demonstrated the fact that when the emergency arises the Net will be ready. Signals on 80 m during the midday sleet were quite good and there should be no trouble covering the whole Zone area on this band at any time. Jim 3ABT has made tests on the 160 m band using about 10 watts input and was read 88 and 89 here at Broadwater at night and daytime respectively. Receiving antenna was a 40 m dipole. Noise level may be the problem on this band though. These last few days have been very fine, those whose signal has been conspicuous by its absence; that of Reg. 3APR. Reg's fire net, by the way, is one of those 1,500 Kc. so he is no stranger to the lower frequencies.

An old friend blew into the Zone Net recently, one Bill 3AWZ. Bill had no trouble making his one wait sign heard all over the Zone. Bill 3AWZ is a bit of a joker and promises a new rig on the air then. Happy holiday to you Chris 3AKU. Wo, no gear! Sharnell 3HQ and 3ADV both having water troubles and under the weather. Neil has the s.b.g. going 1b. now and taking in the DX. Not so Brian, who is playing again with the portable rig. Jim 3ABT promises that one. Do you mean all those frequencies for tuning that s.b. rig yours planning?

40 m has been playing tricks down Colse way for some time. 3AJU and Gordon 3AG were unable to hear each other and they are only two miles apart. Always the unexpected happens and guess what? Harry 3KI on 80 m with a TAI 1 m. He has retreated with most

of his gear to the farm away from the city noises. However, Harry has found that farmers have their troubles too! His nice long wave beam produced such a racket with the wind blowing across it that the old beam was beset after a fruitless search for the new bull!

DX is showing up again on 80 m now and then and one Lb. Q80 was made with Phil 3WEDG with sig. report 589 m. ways. Viv 3ABX has now 1b. rig, and expects to be more active. Tony 3WB has been persuaded to put the key in that Lb. rig of his and has produced a very nice signal. Look out next R.I. Contest!

Organising the Jamboree-on-the-Air has kept John 3AGD busy. The 2 m net is still with a beloved 2 m, but things not very busy down there lately. Yet there are many with v.h.f. gear in the Zone. Mostly it seems up on the shelf.

The Zone Conventions date has now been set for 19th and 20th November at Geelong. The Geelong Club are the hosts and should be a first class show as always.

Latest station to discard the carrier is that of Jack 3ALP. Jack came up with a wait or so which produced an s.b. signal, so what will happen when the final is added for the exciter? Rig is a phasing type to drive a ZL linear. John 3AMC was reported some time back to be about to discard his carrier for a d.b. set-up, and I am surprised that he is going even further and is about to eliminate both those frequency-wasting sidebands instead.

Just wondering what Casey was driving at last month. Must be as I guess, but was it bric-a-brac or bouquiers OH? It should be pointed out that the final is added for the fire brigades in this State are owned and operated by the brigades themselves and not by the S.E.C. or the S.W. Zone. Any local Amateur activity, almost every country dwelling Amateur is a member of his local network and invariably provide their own equipment. That is the reason why they do the work only. Every Amateur within 100 miles of the recent big Gramplans fire was in the fight with the emergency frequencies. Amateur equipment is on the spot in case their frequencies could help.

The S.W. Zone W.I.C.E.N. has a backbone of these emergency frequencies. It has sent every emergency frequency used in the Zone's territory. Not being subject to the same limitations as fire brigade operators, the W.I.C.E.N. is preparing to take a bigger job over longer distances to provide any emergency communication needed whether by fire brigades, C.F.A. or otherwise.

In other fields, let us remember the whole business of radio for fire fighting was pioneered by Amateurs, much of the equipment, commercial and disposable, made or remade by Amateurs and the Amateurs still experienced with new ideas for fire work. We have an Amateur on the Rural Fire Brigades Communications Advisory Committee, and was recently President of the C.F.A., and three of the first handful of firemen to attend the Civil Defence are Amateurs and members of W.I.C.E.N. So, Casey, for once, for the chance to publicise a little.

GEELONG AMATEUR RADIO CLUB

The S.W. Zone, VK3 Division W.I.A. Convention is to be held in Geelong on 19th and 20th November, 1960. Members of the Geelong Amateur Radio Club will be at the club rooms at 10.30 a.m. on Saturday. Please inform visitors on Saturday afternoon. Geelong Amateurs will be "on the air" on 3.5, 7 and 144 Mc. to contact mobiles as they converse as they pass.

On Saturday evening, the Convention dinner will be followed by a general meeting of the Zone. On Sunday a meeting of W.I.C.E.N. operators is proposed, along with numerous competitions and events of interest to all. Those who wish to take an active part should come prepared to be busy on 3.5 and 144 Mc., all-band scrambles, etc.

Accommodation should be booked with J. R. Barber (VK3AT), Carr's Road, Anakie, Vic. Please include 10/- deposit with bookings. Listen to VK3WI Sunday morning broadcast for more details.

QUEENSLAND

BRIMBLEY AND DISTRICT

Any of you who read the letter in the "Let's Buy An Argument" page of "R. T.V. & H. The Voice of the Past," with its interesting programmes for four years on 14.88 Mc. down in Victoria before being caught, will be interested to know that you can't win if you try the same game. You can probably remember

that, in 1957, we were able to get twenty transceivers which the Police found were surplus to their requirements; well, recently I had a phone call from the Police asking that I should supply them with the same kind and addresses of the members who drew the transceivers. When I asked the reason for this request, I was told that some "dummkop" had installed a transceiver of this type in his low truck and had transmitted on the Police frequency. I was later told by one of our members that the "dummkop" was one of the ones we obtained, but the Police wanted the names "for the records".

It appears that this character was a regular "requester" in his low truck business and has realised that he would get business by listening to Police transmissions and going to the scene of accidents immediately. Well, if he had let it go, he would have been "spies", but temptation got the better of him and he just had to say his piece and confuse the gentlemen. For pete's sake, don't do anything like this because you will be caught for sure and you know what "penal clauses of the Wireless Telegraphy Act" means.

The Cotton Tree Social Sunday was a huge success and the weather an official attendance of 63. This Field Day has decided the organizers to have more of the same type of functions in the near future. At the Cotton Tree, the ladies and gentlemen had a wonderful time and they have suggested that there should be a country versus city XYL Rounders match at the first function. The function was a country versus city tug-of-war and the country team won, but wouldn't agree to a re-match. Did you hear about the Australian Record that was broken at the Cotton Tree Field Day? Someone told Vince AVJ that someone was calling to be "talked in" to the location. He got into his car and went to a great deal of trouble to explain where the Cotton Tree was. He asked, "Where are you now?" and received the reply, "We are exactly four inches away!" Vince thought that was an official attendance of exactly four inches away from Vince's whip with a really tiny 7 Mc. transceiver built around the 7 Mc. antenna and called into the 7 Mc. and "Chips" CKR are claiming the "shortest-distance-ever" record Q80.

Stan, our Secretary, is still away as I write this and is now on his way down from the States. He was in the States for a while. Tabland and, from what he has told me per letter, he has had a wonderful time. Now, for the first time, he will be able to use his harness, my XYL and I are going to spend a couple of weeks at Coolangubla with our harmonies. She has given me strict orders that I must take it easy, as he is on holiday.

Our little 6 m x Communicators have been doing sterling service lately. Firstly, they were used during the large bush fire in the Shire Island in the capable hands of Ross 3ZAT. Then

VICTORIAN DIVISION W.I.A.

ANNUAL STATE CONVENTION

will be held on
**SATURDAY AND SUNDAY,
5th and 6th NOVEMBER, '60**
at

MALDON

PROGRAMME

Saturday (from 100 hrs. on):
Sun. Meeting place on arrival at Maldon.
VK3VO's QTY. at 10.30 a.m. in Spring and High Streets, on the left as you enter the town, quarter mile past the Shell petrol station, for direction to second location. 6.30 p.m.: Convention Dinner in the Shire Hall.

Sunday (morning):
8.30 a.m. Leave Maldon for visit to Gold Mine. Age 100 (course) is in the Shire Gardens). 10.30: 3971 Road, for 1st stop. 11.30: 144 Mc. Fux Hunt, start-line. Shire Gardens.
1300-1400 hrs.: Lunch. Shire Gardens. Afternoon activities at Butte Reserve, approx. two miles out of town. 12.30: 3.5 Mc. Tx Hunt. 1.35. All-Band Scramble. 2.30: 14.88 Mc. Tx Hunt. 3.30: 14.88 Mc. Tx Hunt. 4.30: 14.88 Mc. Tx Hunt. 5.30: 14.88 Mc. Tx Hunt. 6.30: 14.88 Mc. Tx Hunt. 7.30: 14.88 Mc. Tx Hunt. 8.30: 14.88 Mc. Tx Hunt. 9.30: 14.88 Mc. Tx Hunt. 10.30: 14.88 Mc. Tx Hunt. 11.30: 14.88 Mc. Tx Hunt. 12.30: 14.88 Mc. Tx Hunt. 1.30: 14.88 Mc. Tx Hunt. 2.30: 14.88 Mc. Tx Hunt. 3.30: 14.88 Mc. Tx Hunt. 4.30: 14.88 Mc. Tx Hunt. 5.30: 14.88 Mc. Tx Hunt. 6.30: 14.88 Mc. Tx Hunt. 7.30: 14.88 Mc. Tx Hunt. 8.30: 14.88 Mc. Tx Hunt. 9.30: 14.88 Mc. Tx Hunt. 10.30: 14.88 Mc. Tx Hunt. 11.30: 14.88 Mc. Tx Hunt. 12.30: 14.88 Mc. Tx Hunt. 1.30: 14.88 Mc. Tx Hunt. 2.30: 14.88 Mc. Tx Hunt. 3.30: 14.88 Mc. Tx Hunt. 4.30: 14.88 Mc. Tx Hunt. 5.30: 14.88 Mc. Tx Hunt. 6.30: 14.88 Mc. Tx Hunt. 7.30: 14.88 Mc. Tx Hunt. 8.30: 14.88 Mc. Tx Hunt. 9.30: 14.88 Mc. Tx Hunt. 10.30: 14.88 Mc. 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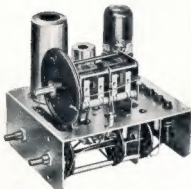
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